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## The achievement of Robbins III

## The rise of an intelligentsia?

The growth of a more pervasive research culture in British universities (and increasingly polytechnics and colleges as well) is a complex phenomenon that has provoked confused reactions from both Government and public. The products of research, especially in science and technology, are very much desired; the ethos of research is just as strongly deplored, especially when it is expressed through the social sciences.

So in Britain we seem to want a knowledge economy but to reject a knowledge society. More specifically we wish to encourage the inventions of science and their effective application through technology, but to avoid the social reconstruction that makes both possible and in particular the growth of an intellectual class.

This carries the discussion far beyond the conventional frontiers of research and its place within the university. It requires an examination of the important changes in the construction of knowledge and the shifting occupations of these in intellectual professions. The question therefore becomes whether the development of the postwar university has stimulated not only a powerful research culture - which Robbins was prepared reluctantly to concede - but also spawned an intelligentsia - which Robbins would have regarded as a baleful phenomenon.

Some people, of course, would argue that such changes simply reflect the rather more solid changes in the social and political conditions to which people in intellectual occupations are subject, and so steer the discussion back to the statistical. Yet it does not seem unreasonable to regard changes in knowledge and in its organization as having an independent and substantial reality for those engaged in such occupations, or to believe that such changes may influence the way in which they see their role in society. Three intellectual movements of the twentieth century appear to be of such fundamental importance that they transcend not only advances within individual disciplines but have changed the map of knowledge in a way that may modify social reality.

The first of these movements, of course, is the continuing revolution in the natural sciences. The main intellectual consequence of this revolution has been apparently to free knowledge from the constraints of culture. Of course, it cannot be argued that the pace and profundity of scientific advances are not profoundly influenced by the social, economic, and political environment. Nuclear research for example is encouraged by governments convinced of its central importance for the exercise of political power (bombs to keep the Russians in their place, power stations to keep the miners in theirs). But the results of scientific advances are not determined by their environment, although their interpretations may be heavily influenced by political considerations.

able to resist the assault of the mechanistic instruments of technology. Nothing seems to be impossible. Reflection is subordinated to action.

The third movement is the rise of the social sciences and the "scientification" of the humanities. Although both these are part of the same intellectual movement, they have had different social consequences: the first has led to a notable extension of the scope of the modern intelligentsia and provided it with its most conspicuous and most criticized intellectual tools, while the second has led to a process of professionalization.

The intellectual thrust of the social sciences, of course, has been to apply the principles of scientific knowledge derived from the experience of the natural sciences to human affairs and to link them with man's apparent ability to manipulate and control his environment, an ambition derived from the success of high technology. The thrust of the academized humanities is more modest and is confined to the first of these objectives, which has the effect of reducing the potential social utility the humanities enjoyed in their older, pre-scientific and literary forms.

The rise of the social sciences and of the academized humanities have been more ambiguous intellectual phenomena than the revolution in the natural sciences and the achievements of high technology. They have not produced the same success story. Scientific knowledge has been aspired to but rarely achieved, man's command over his own affairs as opposed to his material environment has not been significantly increased, and theories have often degenerated into ideologies and even into dogmas.

Yet it would be misleading to cod a discussion of the growth of a research culture, and more widely the development of a self-aware intelligentsia, in universities at this point. For compared with other nations' universities what is remarkable about British universities and the academic profession is their instinctive resistance to adopting this new and controversial role. The degree to which universities were able to go their own way, A. H. Halsey's "dominant position" again, continued to be limited in two respects. First, it was externally limited by the concordat with the state, industry, and more broadly by society.

The first limit implied in this concordat was that, paradoxically, the enthusiastic subsidy of the practical sciences offered by higher education was to increase the negotiating strength of the academic profession and so allow it to pursue its natural inclination to place more emphasis on theoretical sciences. In the 1920s and 1930s university teachers had a new freedom to pursue academic as opposed to practical preoccupations. But if they led to the splitting of the atom or the invention of penicillin who could really complain?

However, the profession had to use its bargaining strength with discretion. In the 1960s it seemed to push its luck too far. The great expansion of higher education triggered by the White Paper on Technical Education in 1956 and by the Robbins Report itself was clearly seen by the Government as an investment in scientific invention and technological excellence. Yet the resources given to higher education were directed instead, perhaps inevitably into an expansion of the social sciences. No doubt there would have been a similar expansion in the humanities had the state been so encouraged by the instrumental potential of its investment. No problem seems to be

The second external limit on this dominion has been treated with much more respect by the academic profession. It has been argued that the state allowed universities exceptional autonomy because they could be trusted not to exploit this independence for ideological causes that might be hostile to the interests of the state. On the whole the profession has accepted this invisible but powerful restraint.

Any tension that has existed between Government and industry and higher education can be much better explained by the desire of the latter to establish the conditions for professional autonomy than by any particular enthusiasm for a left-wing critique of society.

The advance of the social sciences in the 1960s seemed to begin to compromise the apolitical values of the academic profession. The phenomenon of student revolt, feeble as it was in Britain, touched a raw nerve because it might be interpreted as an attempt by higher education to break this concordat of political autonomy. In the end neither had this effect, but the sensitivity remains.

The second limit on the unconstrained growth of an unequalled research culture, and so of an intellectual class, has been internally imposed. The extent to which British universities and the teachers within them have been prepared to accept that more traditional values should be subordinated to the new "research" values, still less those of a burgeoning intelligentsia, has been as decisively limited by the traditions and practices of the academic profession itself.

By international standards the academic profession in British universities displays strong and perhaps surprising solidarity which some would describe also as conservatism. Only in a few other countries where higher education has been developed under British influence does the academic profession share this characteristic to the same degree. The symptoms of this academic solidarity are a considerable equality of privileges and influence between senior and junior staff, the lack of any significant division of labour between teachers and researchers, the absence of any serious stratification of institutions, and a remarkable homogeneity of intellectual and broader cultural values within the profession.

All four features deserve to be emphasized. For what appears normal in Britain is in fact exceptional by international and even European standards. First, the comparative equality of status between senior and junior staff. The tyrannical professor is a rare figure outside a few single professor departments. In many universities the office of head of department is rotated among the academic staff and is not confined to professors. This strong tradition of collegiality was reinforced during the 1960s by two new developments: the growing strength of trade unionism in the academic profession, and the reform of academic government which increased the voice of junior staff within departments, faculty boards, and senates.

The second symptom of academic solidarity is the absence of a significant division of labour between teaching and research which might separate the professions into a lecturing proletariat and a research-minded professoriate. All university teachers are expected to engage in both teaching and research, as well as in scholarship. This expectation is reflected in what are still by international standards generous staff:student ratios despite their erosion since 1975, and the general allowance for research that is made in each university's grant

from the University Grants Committee.

The third symptom is the lack of significant differentiation between institutions in British higher education. Within the universities, of course, the comparability of standards and that is enshrined in the doctrine of the "gold standard" which holds that all degrees are of equal weight, merit, and in the practice of awarding examinations which is intended to achieve this object. Not only are teaching standards equalized in this way, but there is also a reluctance to acknowledge either that research should be concentrated in a small number of elite institutions (as in the United States), or hived off into separate research institutes (as in continental Europe). Nor is the policy such a decisive example of social fiction as is commonly supposed.

The fourth symptom is the rejection of the homogeneity of academic cultural values across the whole British academic profession. It has become a truism to argue that the institutions of British higher education are not the "visible colleges" of individual universities or polytechnics, but the "invisible college" of physics, sociology, history, or engineering. Britain shares this characteristic with all other countries. But in Britain these disciplinary webs that bind together teachers in different parts of higher education are reinforced by broad bands of shared values, about the intentions of undergraduate education, the collegial structure of the university, the cultural dimensions of a higher education, and the location of all these symptoms of the almost anachronistic solidarity of the academic profession in Britain have been modified to some degree in recent years. The equality of senior and junior staff within a strong tradition of collegiality has been seriously compromised by the growth in the number of short-term contracts, teachers and research staff who do not enjoy the normal privileges of the established teacher.

It is also difficult to deny that British higher education has become more formally differentiated. The selectivity exercised by the general university grant has tended to encourage the development of first, second, and possibly third divisions within the university sector. The first division, of a super-league of research universities, at or twelve in number, can perhaps now be discerned. Finally, of course, the traditional autonomy of the institutions themselves has come under growing pressure partly because of reductions in public expenditure on higher education, partly because the expansion of the system has taken it into areas in which lay people can make more sensible judgments.

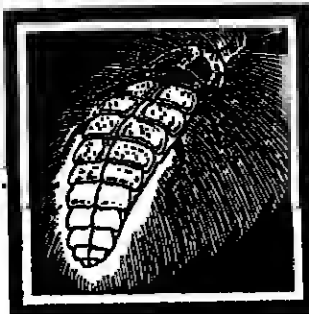
Within higher education, and especially the universities, there remains an abiding impression of a continued strong commitment to traditional values and practices despite recent modifications. In this pattern of anachronistic solidarity, yet it is clear there is not the same pattern in lay society: the development of a strong research culture, in which academic independence can so easily shade into intellectual opposition, perhaps an important reason for change. Next week I will discuss the fourth theme of the Robbins report, the re-fashioning of the relationship between higher education and lay society.

Peter Scott

• Laurie Taylor is on holiday. He will be back on September 2.

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## Sorry, full is the cry all round

This year's post-A-level admissions rush has already left very few university places and led to a huge increase in applications to polytechnics. — Just a week after the examination results came out some universities are avoiding clearing altogether and some polytechnics are offering conditional places subject to availability. Grades are being rigorously enforced everywhere.

Bristol Polytechnic is receiving more than 1,000 telephone inquiries about courses each day. Other institutions have reported similar reactions, following an average 30 per cent increase in polytechnic applications. Courses are filling up faster than in previous years. Manchester Polytechnic this week had vacancies left on only six, four degree and two diploma courses. Most vocational courses, particularly art and design, business studies and computer courses, were almost full, although law courses — traditionally recruiting some of the most highly qualified applicants — were waiting to take their pick of unsuccessful university candidates.

Some admissions officers have been breaking the code of practice of the Committee of Directors of Polytechnics by offering candidates places conditional on A level results but also subject to availability: certain courses at Kingston Polytechnic have done this, but the Middlesex Polytechnic/Observer student service has had cases from other places too.

The senior lecturer from Middlesex running the service, Mr Brian Peirless, said that far fewer vacancies on sandwich courses were still available, mainly because of the difficulty of finding placements. At least one polytechnic was insisting that sandwich course candidates find their own placements before being accepted.

Candidates with only one pass were having great difficulty even getting on to diploma courses, according to Newcastle Polytechnic's academic registrar, Mr Peter Torrens.

Applicants with three A levels but low grades were not getting onto degree courses. "Anyone without two Cs is going to have a very difficult job," he said. "People who would have got degree places previously won't get

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## Lucky six polys rewarded by NAB

Six polytechnics will be rewarded with extra students and more money under the National Advisory Body's provisional plan for 1984/85, the details of which are being sent to all institutions today.

The lucky six are Bristol, Teesside, Plymouth, Preston, Leicester, and North Staffordshire. However, the polytechnics in general will lose out in the new share-out of student numbers being proposed by the NAB secretariat.

Three polytechnics will be hard hit by the new plan. The City of London Polytechnic and the Polytechnic of Central London will both lose substantial numbers of students and substantial sums of money; Oxford will lose students but less money.

The broad outline of the NAB plan became clear this week in a confidential note from the Department of Education and Science which shows how the revised student targets would have affected the distribution of this year's advanced further education pool.

As well as the still secret student targets for 1984/85 the DES recalculation of the pool incorporates other changes, such as a new system of student weighting and the switch from the simple division into classroom and laboratory based subjects to the NAB's more sophisticated programme headings.

The DES note assumes that the pool is the same £560.6m and eliminates further funding, the bonus which the more expensive polytechnics receive to

ease the passage to more equal unit costs.

This recalculation shows that the North-East London Polytechnic, which will actually receive a pool allocation of £16,485,000 this year, would only be entitled to £11,265,000 under the new system. Preston, on the other hand, which is to receive £9,486,000, would get £10,031,000.

The DES note suggests that these violent swings in fortune should be mitigated by half. But the NAB would still face a cut of almost 16 per cent, Central London a cut of 12 per cent, and City of London a cut of over 10 per cent.

Plymouth in contrast could look forward to an increase of 8 per cent and Teesside to a pool allocation that increased by 6 per cent. All these figures are calculated on the assumption that the total amount of the pool remains fixed. As it is certain to be less, the actual outcomes will be less favourable in the case of the lucky polytechnics, and even harsher in the case of the unlucky ones.

The same calculations by the DES show that when the about-to-be revealed NAB targets and other changes in methodology are taken into account, the polytechnics will lose and the other colleges will gain.

The actual division of the pool this year will be £374.8m for the polytechnics and £187.8m for the rest. If the same money was shared out on the conditions that will apply when the NAB plan is in full operation the polytechnics' share would fall to

£350.5m and the colleges' share would rise to £210.1m. Even after 50 per cent mitigation the polytechnics would lose £12.5m.

The DES note also shows how the NAB targets would affect individual institutions' shares of the total student population. These too show wild swings with City of London's share falling by almost 30 per cent and Preston's increasing by about the same amount.

However, these changes have been calculated by comparing 1981/82 totals with 1984/85 targets. As every polytechnic and almost every college has more students this year than last, a smaller share would not necessarily mean and actual cut in students.

But as the trends in the recalculated pool distribution and in student market shares are broadly similar, the new NAB student targets which are being sent out today are clearly the most important single factor in bringing about these dramatic shifts.

What the NAB officers seem to be proposing is that slack capacity in the colleges should be more fully used. A similar motive may explain the comparatively favourable treatment of the less mature polytechnics.

The other factors that have shaped the proposed targets are not only the regional and subject balance criteria which the NAB has already adopted, but also the "bids" made by institutions. There has been some suggestion that those institutions, largely polytechnics, which made responsible and even conservative "bids", have

been taken at their word. The student targets being sent out today have not yet been endorsed by the NAB's board and committee. The board is meeting for a weekend next month to consider the final shape of the package.

How the NAB plan will affect polytechnic budgets (£8m)

	1983/84	1984/85		1983/84	1984/85
NELP	18,485	13,976	Central London	11,577	10,185
Middlesex	18,393	14,650	Thames	8,906	8,352
Kingston	12,944	12,231	Bristol	13,236	13,402
Birmingham	12,576	12,506	Teesside	7,280	7,700
Cowart	12,721	13,108	Plymouth	9,152	9,855
Wolverhampton	12,203	11,884	Plymouth	12,883	12,387
Liverpool	15,337	14,910	Portsmouth	15,680	13,801
Sheffield	22,689	22,334	Heffield	10,408	9,959
Huddersfield	19,805	18,436	Preston	15,253	18,551
Leeds	14,025	13,822	Leicester	17,885	17,414
Newcastle	15,051	14,928	Oxford	9,541	8,186
Sunderland	9,717	9,704	North Staffs	10,577	10,912
North London	10,917	10,428			
South Bank	14,178	12,974			
City	8,605	7,852			

## Training places withdrawn as unions fight for increase

by David Jobbins  
Thousands of Youth Training Scheme places within local authorities hang in the balance as public sector trade unions try to win increases to the £25-a-week allowance and other improvements.

Texas negotiations are continuing in many parts of the country but already two authorities have withdrawn offers of places because of trade union opposition. At least one authority has agreed to the demand for "the rate for the job" for trainees taken on in the local government service. Hackney Council in London has agreed in principle to pay 700 trainees £52 a week — the nationally agreed lowest pay for local government officers.

But other authorities are either unwilling or unable to find the money and two county councils, Kent and Essex, have dropped schemes after failing to persuade unions to give their written consent. Sixty-six places were lost in Essex and 60 in Kent. A further 56 places for youngsters are also likely to be lost in Essex unless the National

Union of Public Employees relents by the end of this week.

So far, these are isolated examples but it seems inevitable that in other cases deadlock will be reached and authorities will be forced to drop their schemes.

The annual conference of the National and Local Government Officers' Association decided against the advice of its leaders to cooperate with schemes only if the rate for the job was paid. If there was no job substitution and if the trainee was able to compete for a job with the authority at the end of his or her placement.

Authorities are already anxious that they will not be able to recover the full costs of the YTS scheme from the Manpower Services Commission and few will be able to meet such stiff conditions.

But senior local government officials believe many Nalco members will ignore the conference decision and continue to cooperate, if only because MSC money is the only growth point in an otherwise bleak area.

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## Thatcher-backed acceptability research causes fears

by Paul Flather  
Government plans to support a series of academic research projects on ways of encouraging acceptance of new technology are arousing fears among researchers.

The £100,000 initiative, backed by Mrs Thatcher, the prime minister, is one of the 17 international programmes following from the 1982 Versailles Economic Summit of Canada, France, West Germany, Italy, Japan, the US, and the UK, plus European Community representatives.

The money will come from the Department of Trade and Industry which has invited the Social Science Research Council to handle the programme.

The principal objective of the programme as laid down by the DTI is "the formulation of generalizable lessons for industry and government on how to secure greater acceptance of new technologies by developing their positive aspects, from an enhanced understanding of the cultural and organizational determinants of public attitudes."

The SSRC has set out to specify reasonable research topics and enlist the best available research expertise judged by intellectual quality, timeliness and formal of research results. The work has to be completed by July 1985.

Applications have already been invited for four projects: information

technology and the organization; new communications; technology and the consumer; comparative national assessments; and historical studies.

Among academic groups bound to be interested in the work are the Technical Change Centre, the Science Policy Research Unit of Sussex University, and the information technology group at Manchester University under Professor Michael Gibbons.

However, the political motivation behind the programme is worrying academics. Mr Alan Day, lecturer in industrial sociology at Oxford University, found it "very disturbing, similar to a Saatchi and Saatchi exercise."

Dr Roderick Martin, a sociology lecturer and fellow of Trinity College, Oxford, said the work would be valuable and important. "But a research council should be concerned with minimizing error, not minimizing negative aspects," he added.

Dr Cyril Smith, the SSRC secretary, said the contract was an important test for the social sciences. He said he was satisfied there was reasonable flexibility in the work to allow for academic interpretation.



## News in Brief

## Three into one will go

A proposal to merge three Scottish further education colleges into one is to go before Borders Regional Council's education committee. There is already one college council for the three institutions, Galashiels Further Education College, the Borders Agricultural College, and Henderson Technical College, and it has reported that the three college principals are generally favourable to the scheme.

The proposal has already been rejected twice by the regional council, in 1975, and 1976. But Mr James McLean, the borders' director of education, said the new recommendation was trying to give unified direction, particularly in the light of the Youth Training Scheme.

## Alliance reviewed

A full-scale review of the structure and funding of the Education Alliance, the umbrella pressure group of trade unions and voluntary groups dedicated to preserving and extending educational opportunities has been launched.

## New helmsman

Admiral Sir James Eberle, aged 56, has been appointed the next director of the Royal Institute of International Affairs. He will take over next January from Mr David Watt who is standing down to concentrate on his research interests. Sir James, once tipped as a possible First Sea Lord, is the first naval man at the helm of the Institute, better known as Chatham House.

## Help available

Potential 1984 higher education students in need of financial assistance can obtain information about a range of sponsorships being offered by 100 industrial and professional organizations and Government departments from the latest annual guide published by the Careers and Occupational Information Centre, *Sponsorship 1984*.

## Yeast extract

The possibility of easily accessible computer records of almost 2,000 strains of yeast and their characteristics is being studied by the Government Chemist's Laboratory. Details of strains with specific characteristics can be obtained by industry at £20 a search.

## Admin diploma

Preston Polytechnic has initiated a new two-year diploma course in bilingual administration, approved by the Business Education Council and intended to train secretarial and administrative staff in international companies, tourism, import-export and shipping. One or two modern languages are combined with business studies, office administration and new technology, with a period in an office either in the United Kingdom or abroad.

## Correction

The Home Office is giving £250,000 a year to a new police training centre at Brunel University, and not as mistakenly printed in last week's *THES*.

## EEC rules affect 46 institutions

by David Jobbins

Ministers are interpreting as strictly as they can a court decision that an EEC student studying to become a teacher in the UK was entitled to a grant, a bursary award and to pay home student fees. In the case of Mr Tariach MacMuir, an Irish student studying to be a teacher at St Mary's College, Richmond, the court held last year that migrant workers were entitled to be treated as home students when following a training course in a vocational college, and were entitled to qualify for a bursary award.

The court said that the EEC regulations which gave this right of access to training at a medical or law school, or

Jon Turney reports from the British Association for the Advancement of Science in Brighton

## Human ability being misused

This new technologies of microelectronics and information technology satisfy all the requirements for a revolution in the economic system, Professor Chris Freeman of Sussex University's science policy research unit said in his presidential address to a special session on technology and the future of work. They offered a rare combination of a drastic fall in costs as well as vastly improved technical performance.

But was this cause for optimism or pessimism? Other speakers stressed that the outcome was not fixed. It would depend on the attitudes of scientists and engineers designing other people's jobs as well as on Government technology policy.

Professor Howard Rosenbrock, of the University of Manchester Institute of Science and Technology argued that the potential of the technology gave cause for optimism, but this could easily be smothered if it was developed in the same way as earlier generations of machines.

He condemned the "fragmentary trivialized jobs" now so widespread as a grotesque misuse of human ability. It was tempting to see the replacement of such jobs by automated machines as a boon, but this ignored the process by which such jobs were created, and by which a multitude of similar jobs was

being created now, he claimed. While it was now possible to design new systems which accepted human skills and collaborated with them instead of replacing them, there was little interest in doing so. "Modern technology is being developed in a spirit that has remained unchanged for 150 years," he said.

In Professor Rosenbrock's view, this was not due to the needs of capitalism, but to the scientific technological outlook itself. He believed any attempt to follow an alternative, skill-enhancing path would lead to a conflict with the current scientific outlook and values. "He is likely to insist that the experts can only disagree validly with his programme when it gives an incorrect diagnosis. If he can improve it sufficiently, the experts will always agree, and if he always agrees he is redundant," Professor Rosenbrock concluded.

If this was a product of the scientific world view, as Professor Rosenbrock believed, there was little prospect of realizing the glowing picture painted by Dr Philip Armstrong of the Technical Change Centre. He finished an outline of the effects of technology on work with a call for new ways of using new tools.

"As rich society has the option of

choosing its technology to fit human needs," he said. "Research and development could be aimed at extending human capabilities, rather than replacing them by machines." Rosenbrock's point precisely. Even more appealingly, Dr Armstrong believed it was also quite possible to direct technology along lines which enabled work to approach leisure, rather than enabling work to be replaced by leisure.

This was optimism worthy of the arch prophet of information technology, Mr Kenneth Baker, the minister for information and technology, but sadly Dr Armstrong gave no examples.

However, Mr Baker gave a large catalogue for examples of aids for the disabled in his paper on "The compensation face of information technology". Microprocessors would help the blind and deaf to communicate, help cripples walk and permit people in wheelchairs to do useful work.

Here it was impossible not to see information technology as a good thing, but this was a far cry from the conflicts over jobs and the economic warfare outlined by other British Association speakers.

The flavour of the rhetoric recalled Professor Rosenbrock's comment: "We do not know where we are going, but it is essential to get there as fast as we can."

## Fashioning clay models worlds apart

The Bible and Dr Graham Cairns-Smith tell us that we were fashioned from clay. But their arguments are rather different. Dr Cairns-Smith has been thinking about technology, and technology is all the rage now.

This was not surprising, for we ourselves high technology organisms, as he pointed out to the Biology section. In fact all living things are found to be "high-tech", in the sense that none of the parts was any separated from the whole. So how did they get there?

Evolutionary theory is pretty sophisticated these days in accounting for the way living things change. But it is down at the primal origin.

The most perplexing thing, Dr Cairns-Smith argued, was that the design of the central biochemical workings was more high tech than anything else. You needed all the bits to make any of the bits. Specifically, he needed proteins coded for by genetic material, DNA, to reproduce the DNA which ordered the production of the next generation's proteins. It was very hard to see how such a mechanism could evolve in simple steps.

The answer, Dr Cairns-Smith believed, was that there must once have been primitive "low-tech" life forms for the mechanism we now see to have on. Not simpler versions of the same thing, but a different system, perhaps made from quite different materials.

In fact, the most likely candidate for the components of the original low-tech systems were minerals that crystallized from solutions of small molecules in water, better known as clays.

Dr Cairns-Smith could show diagrams and slides to illustrate how a matrix could replicate information and even how this system could evolve into "taken over" by genes as we now know them.

The snag was, that although some experiments could be done to make the idea more plausible, the overall theory was unlikely to be open to test unless you had a fresh planet and a few hundred thousand millennia to spare.

## Overseas aid critics criticized

Professor Robert Cassen of the Institute of Development Studies at Sussex launched a blistering attack on academic critics of overseas aid. His main target was Professor Peter Bauer of the London School of Economics, the author of several recent articles arguing that aid is of no benefit to the donor nor the recipient.

Professor Bauer, he said, based his views on anecdotal evidence of the occasional failed project and on a priori theorizing which has little to do with reality. He accused Professor Bauer and his collaborator, Professor Basil Aramey, of errors, ignorance of what aid actually does and fallacious reasoning.

It was regrettable that arguments like theirs could gain currency, but he more fully reflected the deplorable low standard of public debate on aid issues. Professor Cassen argued strongly that the growing interdependence of the world economy meant that aid was in everyone's interest. In the end, the West's prosperity might depend on it.

## Courses are made to measure

An unusual education and training consortium in the West Midlands is set to get official Government encouragement at an inaugural conference at the end of October which Sir Keith Joseph, the Secretary of State for Education, will attend.

Three colleges, a polytechnic and a university have collaborated for what is believed to be the first time to provide a "tailor-made" training package for a specific industry.

A college office-based at the University of Warwick has been set up with the PICKUP (Professional, Industrial and Commercial) programme, a development project of the DES. The consortium, which includes Coventry City Council, two secondary schools and Coventry Technical College,

another two are to come from industry. Mr David Warner, the coordinator of the consortium said the main objectives were to provide one single office for all inquiries; to assist in identifying training needs; to sell higher and further education; to sell higher and further education; to use the services of 1,500 academic staff, institutional equipment and residential accommodation; to offer programmes with professional associations; to make bids for outside money, such as the European Social Fund.

The institutions involved are the University of Warwick, Coventry City Council, Coventry Technical College, and Coventry City Council. The consortium is set up to provide a "tailor-made" training package for a specific industry. The consortium, which includes Coventry City Council, two secondary schools and Coventry Technical College,

## Private colleges put to standards test

by Ngao Crequer

A British Accreditation Council is to be set up next month to inspect and validate independent colleges of further and higher education.

The new body will aim to improve standards in the private colleges and curb those which provide poor courses and worthless qualifications and charge high fees, particularly to foreign students.

The initiative came from the British Council, which chaired the working party looking into the scheme. The council will be independent of the

Government but the Department of Education and Science will advise on inspection procedures.

The new council will consist of one nominee from each of the British Council, the Committee of Vice-Chancellors and Principals, the Council for National Academic Awards, the Committee of Directors of Polytechnics, the United Kingdom Council for Overseas Student Affairs, the National Institute of Adult Continuing Education, the Royal Society of Arts and the London University entrance school and examinations councils.

It will probably be chaired by an academic and will have a small secretariat. The council will appoint a body or part-time inspectors to visit colleges requesting accreditation and these are likely to be retired principals of colleges or members of Her Majesty's Inspectorate.

The need for the new council has arisen because the DES has ceased to recognize or inspect independent further education colleges. Many foreign governments have complained about some of the worst colleges and the ones with a high standard would like to

use not the "mavericks" which give them a bad name.

The council will eventually be self-financing and will be paid for by the 200 colleges, seeking accreditation. In the meantime it hopes to attract funds from a charitable trust.

The founding groups stressed at the beginning that the council should be seen to be impartial, independent and with authority and members should be nominated by recognized bodies, with no direct or financial involvement. In some cases the council will authorize other bodies to do inspections for it.

## Protest sent to Moonie publishers

by Paul Flathar

An Oxford academic has protested to an American publishing company for asking him to write a review without explaining that it was directly linked to the Unification Church of the Rev. Sun Myung Moon.

Dr Bill Newton-Smith, a fellow of Balliol College, was asked by Paragon House Publishers to assess a manuscript entitled *Knowledge and Reality*. His suspicions were aroused because he was offered £250 (£160 for the job, six times the normal rate).

The *THES* has confirmed that Paragon House, which has offices in New York and Washington, was a division of the International Culture Foundation founded by Mr Moon.

Dr Newton-Smith has written to Professor Frederick E. Sontag, chairman of the editorial advisory board of Paragon House, at Pomona College, Claremont, California, saying that he does not want anything to do with a publishing house associated with the Moonies.

"If object in the strongest possible terms to the fact that this was not made clear in your letter," he says, and asks for an account of the exact connection between Paragon and the Moonies.

Mr Richard Wojcik, shortly to become the publisher of Paragon House, said there had been no attempt to cover up or obfuscate the links. "The foundation has been around for more than 10 years and its sponsorship is well known," he said. The editorial board of the church.

## Training places

continued from front page

Public sector union leaders are in difficulties because although they do not want to be seen to oppose a scheme giving hope to thousands of youngsters who would otherwise be unemployed, they are also committed to fighting job cuts and efforts to depress wages. They fear that some authorities might be using the YTS as a source of cheap labour and a weapon in the drive to reduce labour costs.

In its handbook on the YTS, published today the TUC calculates that employers could make a "surplus" of as much as £8,000 for each group of five trainees.



## Lower degrees are high risk

Graduates with lower second class degrees or less are a high employment risk because they are less likely to qualify as accountants, according to the Institute of Chartered Accountants.

Its report published this week is based on a working party study into the educational background of all 1982 examination candidates. It warns employers that there are four categories of students who represent a considerable employment risk.

One is composed of students with a lower second class degree or worse, particularly those with a wholly relevant degree or a business studies degree. According to the ICA's figures only 44 per cent of relevant graduates with lower second class passed the 1982 professional examinations, and only 28 per cent of those with a third class or pass degree.

"Graduates who have spent three years studying accountancy and then achieved only a lower class of degree have probably demonstrated that accountancy is not their forte."

A second group unlikely to do well in the professional examinations is made up of students who received a University Central Council for Admissions rating at A level of less than nine points.

The third group which employers are warned against are students who achieved no more than a pass in a foundation course.

The fourth group comprises those students whose performance in English and mathematics O level as well as five maths A level was indifferent.

## Local cooperatives considered for adult training schemes

The Manpower Services Commission is considering a local collaborative model, along the lines of the Department of Education and Science's professional industrial and commercial updating (PICKUP) programme, as part of a new training initiative it might set up for adults.

It is still analysing the responses to its paper *Towards an Adult Training Strategy* and will hold its first tentative discussions on proposals next month, but one line of thought which has already emerged is to provide modest resources so that local cooperative initiatives can identify training needs.

The idea would be to prompt education providers, which would include the industry training boards, large employers and MSC skillcentres to get together with industry to talk about training needs.

Such a scheme would in effect build upon the PICKUP scheme which has been encouraging local networks of educational institutions and local education authorities on a cooperative basis to provide for updating and training courses adapted to industry's immediate needs.

With this in mind, the MSC is clearly looking towards closer collaboration with the DES over an adult training strategy with the MSC acting as a catalyst rather than as the initiator of programmes specified by itself. In this respect it is looking away from the

Youth Training Scheme model along the lines of the Technical Vocational Education Initiative. Funding would be in the form of a grant in response to bids from local consortia for projects such as a survey to look at labour needs or to pay for a user or consultative committee.

The sums of money involved would not be large but would be sufficient to enable motivated groups to explore new ways of looking at problems in areas where large-scale industries have closed and new employment opportunities are dependent on retraining.

A paper which has been submitted to the MSC shows that after the age of 19 only one third of the British workforce as opposed to two thirds on the Continent have had systematic training. The MSC would like to tackle this within the next five years, although the Government has said that there will be no extra funding forthcoming.

This early indicator of the way in which the MSC is thinking about approaching adult training will do little to allay the fears of the many bodies which oppose the staff cuts. It has end interest groups who were critical of the MSC's assumption in the discussion paper that training could provide jobs. But the moves towards greater cooperation with the DES will provide some consolation to those who said too little credit had been given to those bodies which already provided training.

## Plea for YTS travel increases

Scottish education authorities are to press the Manpower Services Commission to increase travel allowances for young people on the Youth Training Scheme.

The Convention of Scottish Local Authorities after representations from Lothian Region, agreed to ask that travel expenses above £2.35 be reimbursed, instead of the present £4.00.

The limit has remained static for nearly five years, over which period according to COSLA, travel costs have risen sharply and the retail price index has gone up by 75 per cent.

A report from Lothian's administration department says the YTS allowance of £25 a week, already condemned as inadequate by almost every body except the Government, is supposed to contain an element for travel expenses.

Education officials fear that the fact that only amounts above £4.00 can be claimed discourages longer journeys to workshops, employers and colleges, and discriminates against youngsters with special needs who generally have further to travel. On the other hand, young people who are able to walk or cycle are favoured because they still get the basic travel allowance.

Lothian also report that some further education colleges which run free buses to collect students from outlying districts until early last year now have to charge 50 pence a day return fare. For other young people, the normal arrangements are that travel costs over £1.00 are claimable from the region for full-time or block-release courses for the limit is £2.50 a week.

## Universities full up and polytechnics snowed under

continued from front page

Most universities report that this year is even worse than last and some, like Bristol, will have no places left to go into clearing.

At Warwick all social studies are filled. In the arts there are only a few places left in French, but the university will go into clearing in the BEB, where they were given more places and there are vacancies in mathematics.

In the sciences there are one or two places left in engineering, physics, chemistry and biological sciences. Candidates will need a minimum University Central Council for Admissions score of nine points (ie three Cs).

Lancaster has only a dozen vacancies in all. "We have been very strict about grades. The position is similar to last year except we have had many more inquiries from teachers, pupils and parents, indicating their very great concern at a much earlier stage," an official said.

A Leeds official said: "In the arts un-

relieved high quality applications are pouring in. The pressure is really on. Those who cannot get the grades are turned away."

There were excellent candidates in computing and some of the biological sciences, and good applications in electrical, electronic, civil and mechanical engineering.

At Bedford applications have increased by 11 per cent and 50 higher grades have been necessary. Some departments are full but they will go into clearing in chemistry (asking seven points), physics (eight), biology and geography (nine). (A grade A earns 5 points, B four points, and so on.)

At Sheffield applicants with fewer than the required grades have been rejected. There are no vacancies left in arts, humanities or social science subjects except for a limited number of spaces in urban studies.

And there is virtually nothing left in sciences of medicine except for a few vacancies on courses to chemical and

control engineering and in materials, which have gone to clearing.

Applications to Manchester University were up 3 per cent on last year when the adjustments to student intake were made. There are hardly any vacancies in arts, which have gone to clearing, but a few in science, economics and social studies.

There has also been a sizeable rise in applications to Scottish institutions. Applications to Stirling University have risen by 21 per cent with 10,000 applicants for 560 places. The university is still lobbying the University Grants Committee for an increase in its intake which was cut by a quarter in 1981.

Dundee has about 11,000 applications for 600 places, and has already gone into clearing for civil engineering, architecture, town and regional planning, and the pre-dental year. Edinburgh has about 19,000 applications for 2,150 places, and reports that many applicants have very high qualifications. There are 15 applications for

every place in an Academic Exchange scheme, which is a measure already in place.

Stirling has 16,800 applications for 1,500 places. Heriot Watt has 9,000 applications for 500 places. The university is still lobbying the University Grants Committee for an increase in its intake which was cut by a quarter in 1981.

Applications to Robert Gordon's Institute of Technology, a Scottish largest central institution, by students from last year to 4,000, is not exceed 900 places.

Aberdeen University has measures in place for a target intake of graduates. But it reports a major increase in "phony applications" from the "water" said an official. "We still have a lot of phony students largely because much larger numbers than we would have expected. The decision not to come despite the conditions, and are staying on the sixth year at school."

## Student cutbacks postponed

by Patricia Santinelli

Substantial cuts in intakes to non-BED courses at 16 voluntary colleges have been postponed until 1985 by the Department of Education and Science.

But cuts in staff amounting to 80-90 posts and a £1.8m reduction in the colleges' income for next year, designed to bring the colleges in line with the public sector, will be implemented. The 16 colleges involved have been given until September 30, an extension of the original deadline of one month, to tell the DES how they will implement the cuts.

Not included are three joint-funded colleges, West Sussex and West London Institutes and Derby Loddles; Newnam, Birmingham which has a special arrangement; St Mary's Fenham which is closing; De La Salle, Manchester, whose future is uncertain; and Trinity College, Carmarthen.

The decision to postpone the cuts in student intakes of around 400 as well as reduce the loss of staff, originally intended to be one in eight of all posts, was taken by the DES after strong representations from the Association of Voluntary Colleges.

The reduction in staff posts, which will be implemented over two years, is intended to bring down the colleges' student:staff ratio of 11½:1. But the reduction is likely to have an uneven effect as some colleges have been asking to lose more posts than others.

The National Association of Teachers in Further and Higher Education took a delegation last week to the DES to protest about the staff cuts and the loss of consultation. The NATFHE says that although it has opposed the staff cuts, it is well aware that this voluntary section should be brought in line with the public sector. But it wishes to ensure that in the process they are not treated more badly.

Moreover, the reduction in income which amounts to 4 per cent on £45m will bite more deeply in some institutions and this effect is likely to be reinforced when the DES abandons its new funding approach in 1985. The new approach had been designed to allow colleges to bid for extra funds over their base estimates.

The cuts in student intakes to non-BED courses is being set in the context of an overall rise in student numbers of 3.5 per cent. Nevertheless, it will amount to the loss of 1,000 places, or one in seven of all non-BED places at the 16 institutions which have an approximate total of 16,000 places.

There is some concern among the colleges that this may herald a trend in reversing diversification and pushing the voluntary colleges back to becoming solely teacher training institutions, although there is no policy indication at present that this may be so. In fact no pattern will emerge until the Advisory Committee on the Supply and Education of Teachers reports at the end of next year on teacher training numbers for 1986 onwards.

Students in West Germany and Indonesia. At the time more than a third of all foreign students came from those countries.

The students exchange service says there is no justification for the commission's fear that foreign graduates from developing countries intend to stay in Germany permanently. Only 21,000 of the foreign graduates employed in Germany came from such countries. Most of them got jobs when Germany was short of qualified people.

Nor, according to the exchange service, is it valid to argue that foreigners are notably less academically successful or study longer than Germans. Moreover, 90 per cent of those foreigners who dropped out did so in the first phase of their courses. Besides, the service points out, the authorities could withdraw residence permits from foreign students who stayed too long.

The commission's report of 200 pages, dealt with policies towards foreigners generally, and only a minor part was devoted to students. But the exchange service declared that the government was in danger of jeopardising Germany's reputation towards foreign students.



## Overseas news

## Africans allowed no fees credit

from E. Patrik McQuaid

## WASHINGTON

The ambassadors representing Nigeria, Ghana, and Guyana have been notified that because of their poor credit ratings, American colleges and universities are being urged to enrol from those countries only students who pay their tuition fees in advance.

The National Association for Foreign Student Affairs, says this action is a result of Nigeria's inability to transfer promptly funds in its roughly 20,000 students in the United States. The Nigerian Embassy attributes the problem to red tape but American analysts say Nigerian banks are purposely delaying overseas payments because of the country's drastic financial situation, fuelled by the global oil glut.

Some 1,300 American institutions are members of the National Association for Foreign Student Affairs, whose representatives say the measures were taken after complaints from member schools that they were owed thousands of dollars from these particular foreign nationals.

The University of Maryland at College Park, just outside Washington, reported unpaid bills from Nigerians totalling \$70,000 last year. Collection agents there said they were owed thousands of dollars from these particular foreign nationals.

In Lagos, the American Embassy is now requiring student visa applicants to show that they have made advance college payments before issuing travel papers, according to the US State Department.

A foreign students advisor at Washington's Howard University estimated that 10 per cent of the university's 546 Nigerian students would not be able to register for the autumn term because payments from their home banks had not been processed.

Foreign nationals in the States on a student visa violate the terms of their papers if they are not enrolled full-time at an American institute. Attorneys for the Federal Immigration and Naturalization Service, an arm of the justice ministry, say these students are subject to deportation.

## Draft evaders 'must fend for themselves'

from E. Patrik McQuaid

## CAMBRIDGE

All in the space of one week the president of Harvard University has said that male students evading the military draft registration can fend for themselves if it costs them their financial aid, the government has said it will delay enforcement of the controversial new ruling and three American churches have said they will compensate conscientious non-registrants for any burdens imposed by the government or their schools.

In a prepared statement, Mr Derek Bok, the president of Harvard, said the university would not offer scholarship funds, subsidized loans, or subsidized employment to compensate for the loss of federal support to those failing to comply with the new law which requires young male students to register if they have registered with the Selective Service.

Last year the Congress approved an amendment to the Department of Defense Authorization Bill, proposed by the department of education, prohibiting non-registrants from receiving federally subsidized grants and loans to cover college expenses.

The law took effect on July 1 but enforcement was delayed until September 1 after a lawsuit in Minnesota sparked heated debate within the justice ministry. The federal court in Minnesota determined that the regulation was in violation of rights guaranteed in the constitution but the supreme court's reluctance to hear the case until next session has put the matter in limbo.

The high court will decide during its autumn term if it will hear the case. A decision may not come until next year.

In a twist not unusual for particular cases, the government's argument which effectively means non-registrants may start their own classes without fear of reprisal, extension is until October 1, while Congress proposes to advance as effective date.

Mr Bok also voiced doubts about the constitutionality of the law and said many other major American universities which have said that while they may question the wisdom of the government, they will obey.

"In our view the university should be most reluctant to offer assistance and encouragement of any kind to students who violate the law," Mr Bok said. Mr Bok has struck a diplomatic compromise, however, by making Harvard students who choose to ignore the regulation eligible for available campus jobs at regular compensation rates and for market-rate loans. The source of these funds is not tied to federal funds.

"One can appreciate the courage of those who are willing to live by their principles," Mr Bok added. "But individuals who choose to stand on their convictions and disobey the law may normally bear the consequences. Our expressions of conscience are highly personal and one cannot expect others to pay the cost."

Federal aid for Harvard's 15,000 graduate and undergraduate students totals about \$35m annually and roughly 9,000 students receive federal aid in grants or loans. There are no figures on how many students are registered for the draft nor how many of these are receiving federal aid.

## Israeli institutions 'cannot pay August salaries'

from Benny Morris

## JERUSALEM

Israel's university heads sold this week that the institutions of higher education are broke, cannot pay salaries for August and probably won't be able to open for the coming academic year.

This announcement, made at a special press conference in Jerusalem, came hard on the heels of a Treasury decision to cut university budgets across the board by 10 per cent as part of a major budget slash affecting all government ministries.

Some 70 per cent of the budget of Israel's six universities and the post-graduate Weizmann Institute of Science come from the state.

The Treasury decision is not final, and education minister Zevulun Hammer is fighting it, as well as other education budget cut demands in the cabinet.

At the press conference, Shlomo Gazit, the president of Ben-Gurion University in Beer-Sheva, said that a further decline in the level of teaching and research at the universities would mean that Israel would lose its qualitative edge in science and technology over the Arab states.

This would endanger Israel's security said Gazit, a retired Israel defence forces major-general and former head of military intelligence.

Using the continuous devaluations of the Israeli shekel, the Treasury over

the past year "shortchanged" the universities by 14.5 billion (about \$400m) said Gazit, who also claimed that the Treasury has withheld money to cover the recent university teachers' pay rise award.

The universities have been forced to take commercial loans from the banks and are paying high interest rates.

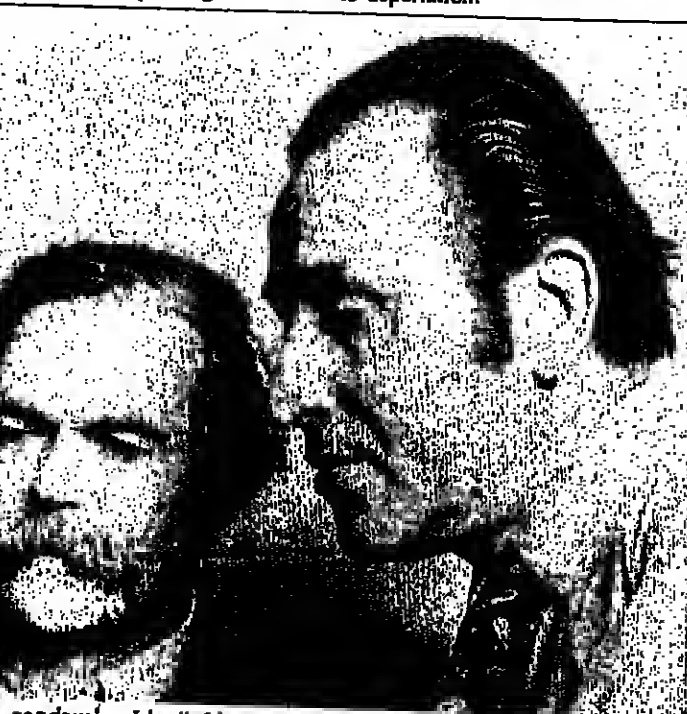
Bar-Ilan University rector Professor Michael Albeck said that even if the 10 per cent budget cut was not implemented, the universities might be forced to "close their doors and hand over the keys to the government" because of the cumulative effects of constant cuts in past years.

Speaking on the theme of Israel's "qualitative edge" over the Arab world, Gazit said that in 1970 there were 15,000 students in Arab states studying computers, science and technology compared with 15,000 in Israel.

In 1980, there were 90,000 Arab students in these fields as compared with 20,000 Israelis. The position is expected to continue deteriorating said Gazit.

Hebrew University president Dan Patinkin said that there was a "real danger of the system of higher education sinking into mediocrity."

He pointed out that many Israelis aiming for higher degrees go abroad because they see the Israel universities cannot keep up with the latest, costly scientific advances. Once abroad, many of these scholars do not return to Israel.



Czech academics Lis (left) and Batek: still in prison

Mitchell, playwright Mr Trevor Griffiths and Professor Peter Stern, of University College, London.

Details of academics still in prison were also given at the launch. Rudolph Batek, a sociologist, former Charter 77 spokesman, serving five and a half years for "subverting the Republic" is being denied proper medical treatment.

## Minister axes trainees grant

from Lindsay Wright

## WELLINGTON

Now Zealand's Minister of Education Mr Merv Wellington has axed a \$1000 (€435) grant to the Teacher Trainees Association because they protested about their low grants.

Post-primary Teachers Association General Secretary Graeme Gillespie described it as a "petty and heavy-handed response to an entirely legitimate action by teacher trainees".

Cery Brown, past president of the New Zealand Educational Institute, expressed outrage and described Mr Wellington's move as "bullying tactics which have no place in the classroom and are even less acceptable in a minister of education".

The \$27 (£10.20) a week grants (raised just before the demonstrations to \$30 a week) replaced the salaries provided for previous generations of student teachers - bonded studentships which were axed last year.

The 8,500 trainees, half the number of a few years ago, are able to supple-

ment their grants with vacation employment but their six week Christmas vacation puts them at a distinct disadvantage beside the four month earning period of university students on the same grant levels.

National TANZ president, Alison Taylor, says that some trainees are paying up to \$24 a week for public transport and have extra teacher-related expenses of up to \$1000 a year. On top of this they must pay superannuation, based on a working teacher's wage.

A survey of college students suggests that with the academic year only two thirds completed a quarter of them are already in debt.

Mr Gillespie said that secondary teachers are concerned about the financial plight of individual trainees and about the effect the inadequate allowances system will have on the composition of the teaching service in the years to come. His association may help the student teachers organization with \$1000 from its emergency fund.

## Academics lack aggression and competitiveness down under

from Geoff Mason

## MELBOURNE

There are noteworthy differences between the universities in Britain and America, and in Australia, it has been said, the universities lack aggression and competitiveness.

The view of Zoltan Matolcsy, senior lecturer in the school of management and economics at the University of Melbourne, is that the American universities are more aggressive and competitive than the British ones. He estimates that many hundreds of American universities are living in Canada, although only a few are known to be teaching in a university.

Mr Matolcsy said that in America, particularly in the standard appointment of faculty for five years and during that time the appointee has to prove that he or she is a competent teacher and researcher. Even after five years, the chances are that only about five per cent of those appointed will be re-appointed.

It was different to Australia, where Mr Matolcsy said, "Anyone can teach and do a lot of things over the years and then receive a permanent appointment." Mr Matolcsy said that there is also a tendency in Australia to appoint people to positions because many researchers take that long to complete

The lack of job security in America seemed to provide an incentive to be a dynamic teacher and active researcher, Mr Matolcsy suggested. He pointed to a similar situation at the London Business School where tenure was only available at a professional level. Moreover, he said, the renewal of contracts and granting of promotions were dependent on teaching ability and research output.

Mr Matolcsy noted that compared with American universities, those in Australia offered lesser financial rewards. He called for institutions to give thought to offering "packages" to people, rather than straight salaries.

He suggested that teaching jobs could be unevenly distributed between academics concentrating on research and those who did not. The allocation of study leave should similarly reflect the quality of academics with active research records, who should be able to visit and interact with other overseas academics more promptly than those primarily concerned with dispensing existing knowledge, he said.

Mr Matolcsy contrasted the situation in Australia with the University of Chicago where, he said, "Everything is negotiable: the number of teaching hours, the nature of research support, the secretarial assistance."

## A modern testament of faith

The town of Torun in north west Poland contains three immense Gothic churches: St John's, St Jacob's and the church of Our Lady, all built between the thirteenth and fourteenth centuries.

Each reflects the combination of the Western and Eastern European traditions; the former's rich stone ornamentation, the latter's bolder and more sparing outlines. The UNESCO, in a flourish of aesthetic bureaucracy, has designated all three "outstanding examples of world culture".

An exhibition of photographs of the three church interiors has just ended at Coventry (Lancaster) Polytechnic. Called *Prayer in a Gothic Cathedral*, it was previously on show in two monuments to twentieth century religious architecture: Coventry Cathedral and Liverpool's Metropolitan (Roman Catholic) Cathedral.

The photographer, Tomasz Sobiecki, was born in Torun 31 years ago. Now he teaches English and geography at the local high school and in his spare time - not much at present with a pregnant wife and infant daughter to look after - takes photographs.

During the recent troubled years in Poland, the economic situation has worsened and photographic materials, including film, have been in increasingly short supply. The exhibition that has just ended at Coventry took Mr Sobiecki seven years - from 1973 to 1981 - to complete. Another exhibition, this time concentrating on a crucifix in one of the Torun churches is provisionally planned for next year.

Mr Sobiecki's links with Coventry stem from a meeting 10 years ago with a Coventry (Lancaster) student, Gareth Evans. Both were student delegates to an international student conference in Poland. The Polish student wanted to practise his English, and the two men continued to correspond while Mr Evans became a lecturer in the polytechnic's management studies department.

After *Prayer in a Gothic Cathedral* was exhibited in two Polish churches, Mr Sobiecki wrote to his friend in Coventry to try and arrange for it to go to England. While arrangements were getting under way, marital law intervened. Liverpool Cathedral agreed to take the exhibition in February this year, but at that stage Tomasz Sobiecki could not get permission to leave Poland.

Meanwhile the 36 photographs, many of them the same size as substantial paintings, had been brought out of



Gothic crucifix in Torun church, subject of a proposed exhibition.

the country by a strange coincidence.

Once Liverpool and Coventry accepted the exhibition, Gareth Evans contacted various British firms exporting to Poland, asking if they would bring the photos back with them. Although the Polish authorities had given all the necessary permits for them to be brought out, the companies would still have been involved in additional red tape, and all of them refused to help.

With little hope of sending his exhibition to its now-promised venues, Tomasz Sobiecki left his house for work earlier than usual one day, and passing a church saw a lorry parked in front of it.

On the side of the lorry, written in English, were the words "Medicines for Poland". Inside, in the passenger seat, was the navigator: a young woman from Nottingham who turned out to be of Polish extraction.

He went up to her, and asked if the lorry - there to supply food and medicines from a British relief agency through the Polish church - would take his photographs back to England. "I had no guarantee that the photos would be delivered in good condition," he recalls. "But I had nothing to lose".

She wanted to know if he had permission to export the photos, which he had. He went back home, collected the photos and official documents to go with them, brought them back to her, and the lorry drove off. The whole matter, he says, took less than five minutes to arrange.

The photographs arrived in Britain

## From Torun to Coventry - Karen Gold looks at the work of Polish photographer Tomasz Sobiecki

undamaged, and were passed on to Gareth Evans, who proceeded to set up the display in Coventry Cathedral. By this time it was April, two months after Sobiecki had been due to come to England. Back in Poland, he knew nothing about the exhibition: it took several months after he put the photos on the lorry before he even heard that they had arrived.

Eventually, in early July he came to Britain, and to the polytechnic where his exhibition moved later that month. While it was on there, he divided his time between the photographic laboratories and photography section of the library, arriving early in the morning and leaving only when the buildings closed.

As well as experimenting with some new film for the polytechnic's technicals, it was the first time he was able to use the more expensive and sophisticated materials necessary to work in colour: all his pictures for this year's ex-

hibition and next year's are in black and white.

The pictures in this year's exhibition were planned after long discussions between Sobiecki and staff at a Roman Catholic seminary in Poland. They are divided into three groups: the first suggesting the impact of Gothic architecture, its symbolism, spaciousness and silence; the second shows people becoming familiar with the church, lit by candles in prayer; the third through a collection of symbols is a reflection on the Christian interpretation of human life.

In the exhibition guide, it is suggested that against Poland's turbulent history the photographs convey Sobiecki's search for tranquillity and introspection, in stark contrast to

events outside.

The exhibition planned for next year concentrates on a single huge crucifix in one of the Torun churches. The pictures will be hung in long ranks in Coventry Cathedral next Easter. It, both by candles and modern lights, and enhanced by the music of a modern Polish composer: Penderecki's *St Luke Passion*.

The music is an additional element, but the combination of modern and Gothic is still the central metaphor of Sobiecki's work. "Photography is a modern artistic language," he says. "The Crucifixion took place 2,000 years ago. Therefore I want to show this subject using a modern language, which will be easier to understand for people of our time."

Felicity Jones reports on the 'crash course in culture' run at Cambridge for IBM employees from all over the world

## Programme with a different kind of input

Social psychology, modern classical music in the morning followed by astronomy and Shakespeare's *Julius Caesar* in the afternoon and a visit to a performance of the play at Stratford-upon-Avon the next day would provide a concentrated dose of culture for most students. But maintenance engineers on the IBM course at the University of Cambridge seemed to take it all in their stride.

From the point of view of both the company and the university's extra-mural department the programme, now in its seventeenth year, has provided the kind of education which they want to promote and which, with the growing emphasis upon continuing education, can be seen as a model of its kind of in-service training. For the company the course carries out "the motto for the 1980s" given by the chairman of the board of IBM World Trade Corporation: "The most valuable managers of all will be those who have learnt how to learn."

While for the university's board of extra-mural studies, the programme has managed to achieve the right balance between professional continuing education and a broad liberal general study which has been the hallmark traditionally of adult education.

Most of the men (women rarely go on the course because they are poorly represented within the company itself) came into the company as customer or "field" engineers who would go out and service their customers' equipment (mainly computing equipment). They will have worked their way up the career ladder and will be managers

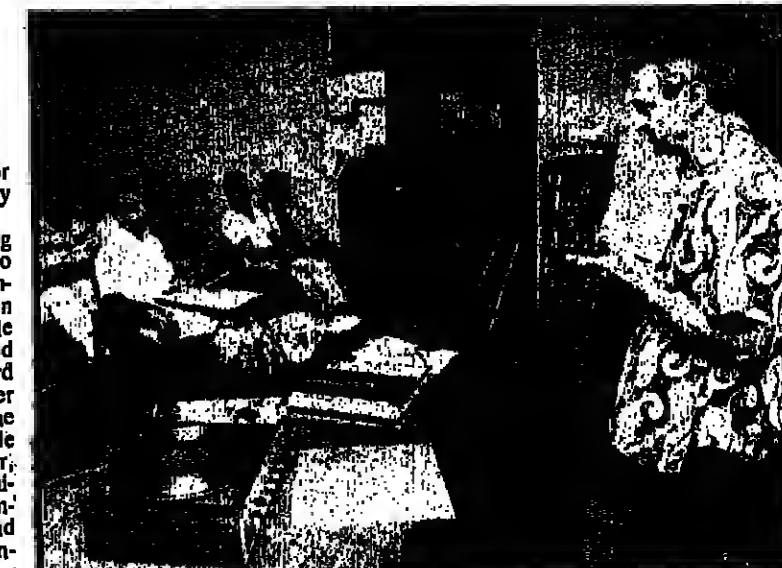
who are considered to have "HMP" or higher management potential, as they say in the company's jargon.

Over the years a well-oiled screening procedure for selecting the 30 or so participants in the seven week Cambridge programme has evolved. In reality, IBM is a loose conglomerate of individual national companies and each year a country will put forward several candidates who they consider have HMP and would benefit from the course. Later in the year, Dr Leslie James, the course academic director, and Mr Michael Allart, academic administrator and director of the Cambridge department, travel around Europe holding lengthy two-hour interviews with the candidates to discover who would be able to cope and profit from the strenuous summer school which is held on campus at Churchill College.

This year the participants were drawn from Venezuela, Thailand, Japan as well as Germany, Sweden and the United Kingdom. And for the first time two participants from the United States took part.

Most of them will never have had any experience of higher education (although there was one graduate participating this time) and will have never been inside a college or university. This makes their period at Cambridge's unique and in some cases, traumatic and life-changing experience. It is said within IBM that you can always tell who has just returned from the programme by the wild ideas which they suddenly try to introduce back at work.

The social psychology lecture given



Music lectures form part of the IBM course curriculum.

by Mr Anthony Storey, the rugby-playing subject of his brother's novel *The Sporting Life*, provided plenty of ammunition in this direction. The theme of the morning lecture was how to relate better to other people, such as the boss, by finding out their reactions to you through the Rogerian, as opposed to the Freudian, method of psychoanalysis.

The notion of using techniques of psychoanalysis on maintenance engineers back home in the company provoked some surprisingly hostile reactions from some of the participants. One fiery, red-headed Italian from Naples succinctly summed up the feelings of one camp when he remarked that IBM was in the business of making money, not training sick people who ought to go to hospital for psychiatric help.

Yet another said he knew somebody who had been on the Cambridge course and had gone back to his company and tried out the techniques on a colleague and had done "irreparable damage".

But on the whole, most of those on the course thought that understanding methods for relating to people was an essential part of the mental equipment of being a manager in IBM. The company itself runs counselling sessions and carries out regular feedback exercises anyway to ensure that nobody in harbouring grudges, which could be detrimental from their work. There is an *esprit de corps* at IBM which very few on the Cambridge course would have questioned.

The department of extra-mural studies has a free hand more or less which it comes to devising the course except

that it is agreed that it will not touch on computing or management. Otherwise the department has a free rein to choose what books are discussed (*Animal Farm* and *The Great Gatsby*); other topics covered (from "Industrial society" to bird migration); and who should be invited to come as outside speakers, as well as study-related excursions to Snape Maltings or to an astronomy laboratory.

Guest speakers this time included a heart transplant surgeon from Papworth Hospital, a director of the National Farmers' Union, the chief constable of Sussex and head of the earth sciences division of the British Antarctic Survey.

Mr Michael Allart, the director of Cambridge extra-mural department believes that this liaison with IBM shows what extra-mural departments can do in the way of continuing education without restricting it to purely vocational-related training. Other companies are showing an interest in taking something similar on board.

They are directed towards Mr Brian Robinson, a director of United Kingdom IBM who went on the course himself as a middle manager before becoming a director of the company. He says that, impossible as it is to put a value on the programme, the company thinks it has been a worthwhile investment to develop people's skills on a wider basis. Those managers who have been on the course are better equipped to talk with their customers.

It is an enlightened, if expensive, view to take of education which few companies, even multinationals, seem to be prepared to invest in. To put 35 senior managers onto a leafy campus for seven weeks at the company's entire expense is an enormous investment but too much IBM has found pays dividends. It intends to continue the association with the University of Cambridge.



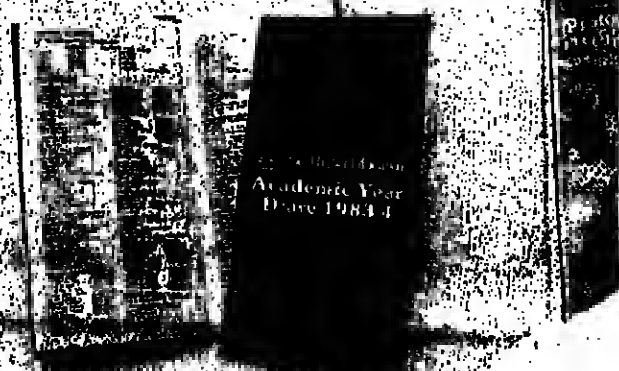
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Ngaio Crequer, John O'Leary and Peter Scott report from

## Take your partners to task

### UNIVERSITY/INDUSTRY PARTNERSHIPS

Tensions between academics and industrialists leading to relative isolation and widespread misunderstandings were confirmed as a worldwide phenomenon at sessions of the university/industry partnerships group. But there were also plentiful examples of a new spirit of cooperation and a determination among the delegates to break down existing barriers.

Naturally, the group, chaired by Sir Henry Chilver, vice-chancellor of the Cranfield Institute of Technology, represented the converted. But successive speakers reported a growing realization by governments as well as universities and industrialists that a partnership was now vital to economic success, and was in the interests of both sides. The difficulty was in bringing them together and evolving a mutually advantageous relationship.

Professor Guy Denielou, president of Compiegne University, in France, warned particularly against over-simplified solutions which would appeal to politicians but be ineffective. He listed 11 areas of cooperation in his own institution, all relatively unimportant in themselves but contributing to a valuable system.

Both the universities and industry were in crisis, he said. The traditional methods threatened by a technological revolution more significant than any change since Neolithic man ceased to be simply a hunter and started an agrarian society. Whole industries, both efficient and inefficient, were being superseded by competition impossible to combat and within the universities the new technology encouraged interdisciplinary work which was destroying traditional academic disciplines. Both sides would have to solve their own problems before the larger question of partnership could be tackled successfully.

Professor Brian Wilson, vice-chancellor of the University of Queensland, found isolation still more marked in Australia but Dr Douglas Wright, president of the University of Waterloo, Canada, outlined a wide-ranging programme of cooperation at his own institution. The new industrial revolution would demand such interchanges, he said, whereas universities had taken almost no part in the first. The latest advances were based entirely on science and technology, to such an extent that knowledge had become the most important commodity in the world.

Dr Stephen Bragg, one of Britain's new academic brokers, was also optimistic about the potential for partnerships. Twenty years ago, he said, the idea of government-funded directorates steering university research into particular areas would have been considered a breach of academic freedom. But now the brokers were helping to channel the huge natural resources of universities to the national interest by channeling them to firms.

He found improvement still needed in several areas. Universities would have to accept their duty to produce results in a way comprehensible to the general public and should regard it as their duty to be open to the public. He said that many of their ideas were not understood or not taken up by industry. He said that many of their ideas were not understood or not taken up by industry. He said that many of their ideas were not understood or not taken up by industry.

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## Down to earth - and

The five-yearly Commonwealth Universities Congress, held at the University of Birmingham last week, is the greatest and grandest of international university conventions, the nearest thing higher education has to an Olympic Games.

The congress, organized by the Association of Commonwealth Universities, brings together not only three of the nations with the most advanced system of higher education - Australia, Canada, and Britain - but also a nation with one of the largest systems, India, and a string of some of the world's smallest and least developed states, a few with total populations not much more than of an American mid-west multivariety.

This makes the CUC an almost unique sounding board for universities' global preoccupations. In the themes that dominate successive congresses at their quinquennial intervals, Edinburgh 10 years ago, Vancouver five, Birmingham last week, and Perth in 1988, it is possible to follow the intriguing shifts in these preoccupations.

In this context the thirteenth congress marked a kind of descent for the universities - into the abyss of total preoccupation with immediate social and economic demands, a few might argue; out of the clouds to place their feet firmly on the ground of the late twentieth-century world, a majority would probably reply.

Ten years ago the preoccupation was with universities as centres of cultural renewal five years ago with the then unfamiliar and disturbing phenomenon of the slowdown of student growth and the first serious budget cuts. Last week the concern was with the role of universities in technological innovation. The over-ambitious hopes of the 1960s had faded and the cuts, perhaps because they have become part of the fabric of everyday experience, were barely mentioned.

So the Birmingham congress was a business-like occasion. The social con-

Henry Chilver stressed that partnerships were not pseudo-commercial ventures to sell surplus ideas and products. They were essential to the future health of both universities and industry, and should not mean the undermining of academic values. There was no single formula for success but the best initiatives had come generally from the university side with the help of receptive industrialists.

J.O.L.

## Two ways of keeping in the know

### CONTINUING EDUCATION

Two opposite views of how best to develop continuing education within universities emerged during the five discussion periods on this topic at the congress.

The first was encapsulated in the proud ambition of the electrical engineering department at the Massachusetts Institute of Technology to keep all its graduates up-to-date technologically throughout their working lives, reported by Professor T. A. Brzustowski, vice-president of the University of Waterloo in Canada. Professor Brzustowski argued that the turnover of science and technology could no longer claim that universities could no longer claim to provide their learning by addressing the fundamental needs of their graduates. He said that many of their ideas were not understood or not taken up by industry.

So instead, universities would have to evolve new updating courses, intensive, accessible, and very up-to-date in order to maintain the technological competence of their graduates. He imagined that by the end of the century many graduates would use terms like "check-up" or "re-orientation" to describe their relationship with their universities.

sequences of technology, rural development, university/industry partnership, technology transfer, continuing education, these were the particular themes. They were reinforced by an elegant keynote address by Sir Adrian Cadbury, heir of one of the great Midlands industrial dynasties, also following his close involvement in the Leverhulme programme recently involved in higher education.

The five days of the congress would have brought little comfort to academic colleagues who believe that it is the duty of the universities to stand apart from society or to their radical rivals who argue that they must reform it. It is almost all the discussions the practical or relevant university took shape in the proceedings over the liberal or illiberal university as a model for the present and future.

Perhaps the congress was suffused by the spirit of Birmingham itself, a city at the centre of a region where many of the key values of industrial society were forged two centuries ago. It was from here that Matthew Boulton, one of the pioneers of the steam engine, wrote to Boulton in the year of the American revolution: "I tell here, what all the world desires to have, power", as Sir Adrian reminded the congress.

Yet, inevitably because the congress was organized by an association of Commonwealth universities, the spirit of Birmingham did not justify with a South dimension was constantly reinforced. It too was reinforced by the eloquent rhetoric of Commonwealth Secretary General Shridath Ramphal, opening address.

Two of the five themes, rural development and technology transfer, were particularly relevant to the concerns of the Third World; two more, university/industry partnership and continuing education, perhaps more relevant to the more advanced nations.

have to be seen as a central and fully integrated role of all departments.

The alternative view was expressed by Dr Stephen Griew, president of the University of Alhambra, also in Canada. He argued that for continuing education to flourish it needed to be kept separate.

He added: "A necessary condition for its success is, I believe, moral, organizational and indeed, economic separation from the institution's core activities."

Only in this way could continuing education be able to stand up to the existing vested interests in universities and be able to negotiate different incentive systems to persuade academics that they could become committed to continuing education without jeopardizing their careers and reputations.

Dr Griew also appealed to universities to be modest. "Too rarely are we the universities prepared to admit that anything is beyond us and often we persevere in trying to produce courses which we know could be developed with much greater ease and effectiveness by other bodies, sometimes by the consumer themselves," he explained.

Often universities should interpret requests for help with continuing education as requests to act as brokers bringing people together who might help each other rather than as an invitation to take a direct initiative. A compromise between the Brzustowski and Griew positions was offered by Professor Brian Crombridge, director of the department of extramural studies at the University of London. He argued that continuing education had to be split up into different components.

Some parts of continuing education, such as traditional extra-mural courses, were best left to separate departments. Others, like specialist professional updating, had to be done by mainstream academic departments as part of their normal work. Others again, like coping with mature students, required the skills of both continuing education and mainstream departments.

Sir Geoffrey Allen, director of research and development at Unilever and former chairman of the Science and Engineering Research Council, took a similarly intermediate position.

the thirteenth quinquennial Commonwealth Universities Congress held in Birmingham last week

## business

of the Commonwealth. The fifth, the social consequences of technology, was a common global preoccupation. So maybe the spirit of Birmingham and the spirit of Brandt shaped the honour of influencing the shape of the congress equally.

In any case the spirit of Birmingham has not necessarily been a stranger to international concern. For it was the high imperialists of the late nineteenth century. Inspired by Joseph Chamberlain the effective founder of the University of Birmingham, who first tried to interpret empire as a new world order in which modern values were fully incorporated rather than as simple colonial piracy. The Commonwealth in a devious and distant sense may be in the same succession.

The coherence of last week's Commonwealth Universities Congress came as much from the informal, even symbolic, association of these traditions as from its formal agenda. Some sessions worked well; others hardly at all. Yet, thanks very largely to the superb organization of the host university, the congress as a whole worked very well. Not an Olympic Games perhaps because the competitive striving for excellence was absent, more a festival of Commonwealth universities in which past sentiment, present partnership, and future purpose are confusingly but richly mixed.

So perhaps a suitable valedictory might be Joseph Priestley's dedication to his former colleagues in the Lunar Society of Birmingham two centuries ago:

There are few things that I more regret in consequence of my removal from Birmingham than the loss of your society. It both encouraged and enlightened me as what I did there of a philosophical kind ought to be attributed as much to you as to me. From our cheerful meetings I have never absent myself voluntarily and from my pleasing recollection they will never be absent.

P.S.

He argued that conventional universities and polytechnics acting in their current styles could not be successful in meeting all the subsequent needs of modern graduates in a modern industrial society.

However, he believed that Open University-type courses acting in concert with conventional institutions could make up much of the shortfall. Professor Fred Jevons, vice-chancellor of Deakin University in Australia, argued that the educational disadvantages of distance education were already balanced by the advantages, and that new developments in communication technology would swing the balance in its favour.

P.S.

## The shape of change to come

### THE SOCIAL CONSEQUENCES OF TECHNOLOGICAL INNOVATION

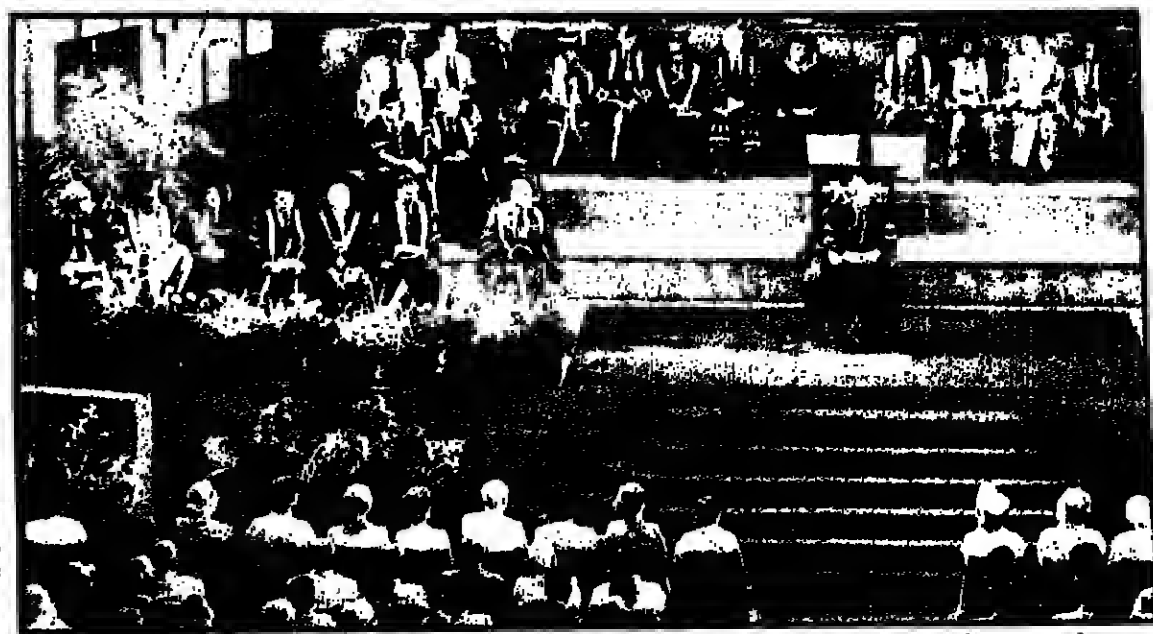
This session began with a paper by Sir Bruce Williams, director of Britain's Technical Change Centre, that might have been sub-titled, "Industrialization brings advantages and disadvantages. Discuss."

He ran through some of the changes brought about in Britain because of technical changes in the last 200 years: new methods of agriculture, increasing population, new markets, new industries, changes in types of employment, more wealth (for some), environmental control and pollution, a greater potential for war.

Technical change itself was not new, he said, but it was not until the eighteenth century that it became not episodic, but cumulative.

This point was taken up by Lord Flowers, rector of Imperial College, who wanted to know the reasons for this change in nature. Which was the horse and which the cart, innovation or education, he asked.

He threw out two questions for participants. It was Sir Bruce who



Opening ceremony... the Commonwealth Congress, higher education's "Olympic Games", gets under way

speculated, technological developments occurred in waves, was the next wave already with us as the embryo biotechnology, with information technology as its enabling machinery.

He questioned whether the description of how technologies arose in the West had any relevance to the developing world, with the presupposition of a positive cultural response. Or was it just a question of who happened to be the technological top dogs?

This question of whether other countries had to follow the example of the West kept coming back. In Bangladesh, one speaker said, people had the expectation of change and a better standard of life, but family life was breaking down, people did not know how to use training manuals, technicians were produced but then left. They had technology on tied terms.

Further, another speaker asked, what was Britain's example when a country had 70 per cent of its people in villages, working the fields.

Another strongly challenged the claim that in history technological change was progress. We were still only finding out the consequences of the Industrial Revolution. Were people really better off being tied to the factory rather than the home?

The same theme recurred - technology would only advance as and when we let it. According to H.I. Macdonald, president of York University, Canada, it would be a prime job of universities to encourage ethical and moral decisions about its control. So the stress must remain that universities were about developing inquiring minds. Individuals would decide whether they would allow themselves to be victims of changes in the work place.

Technology and education went side by side because the former meant retraining, rehabilitation and re-adaptation. Technology therefore led to the need for more growth in education. He likened the removal of chimneys from the first books to today's information revolution.

Professor L. M. Blirt, vice-chancellor of the University of New South Wales, highlighted one important difference in the dynamic of change, its pace. He said, by way of example, that the effectiveness of weapons had increased 200 million-fold between the emergence of human beings to the present - in fact, in only the last 200 years.

He was most pertinent in discussing the moral question which was fast overtaking universities in particular, and society in general: should we cease to do some of the things that men and women are capable of doing? Or did scientific inquiry have no barriers or frontiers?

But that question was altogether too daunting. Professor Blirt listed the challenges he thought would shape the next problem of securing the maximum use of resources but preserving them for future generations.

● Censuring the universities linked their research work with sufficient preparation for adequately trained scientists and technologists;

● the problem of what research, directed and initiated by whom, and questions of its "usefulness". This included the question of who pays, and what the buyer contracts for, and how this changes a university's overall approach to the business market;

● making effective use of information technology;

● universities keeping abreast of social political and economic adjustments created by society;

● the ethical dimensions of scientific research.

This and other papers raised the question of whether present shapes of universities and their systems were right to cope with increasingly technological demands.

Dr C. R. Mitra, director of the Birla Institute of Technology and Science, made the point that universities were dynamic and as practices changed, new disciplines arose. But the scale of change was now so great that there needed to be fundamental changes.

Universities were necessarily slow in adaptation. To cope with new demands there must be a new structure for the curricula and a new mode of teaching. The university itself must become broader to enable it to welcome innovation of all kinds.

So if in the past the university was the repository of knowledge, in the future it would become the source of innovation.

N.C.

## Which comes first: supply or demand?

### THE DEVELOPMENT AND TRANSFER OF TECHNOLOGY

Though their backgrounds were different there was much to unite members of the Commonwealth discussing this topic.

How to persuade politicians to approve, and finance, the universities to ensure their research has a use maintained; how the universities could convince the politicians that this was ultimately in the governments' own interests; how to identify which research was useful to developing the country's economic base, or how to prove that the question was false; how the universities could resist demands for change internally and externally as their financial dependence on government changed or increased; whether the universities should resist those demands.

But to begin with there was a discussion on what science and technology were, and what role they had to play in fostering economic change and activity.

Professor Fred Jevons, vice-chancellor of Deakin University, showed that science was the popular instrument of change since the war, the "mother" of invention, until the skies when distillation set in.

Though there had been a massive expansion of science the old problems still remained and new ones, pollution, environmental damage, had appeared.

So the driving force, it was felt, ought to be necessity, or the market. Governments should be guided by these forces rather than fund research directly.

Academics seemed to support this view in their research into how innovation arose and why it was exploited, but current academic opinion is that 1970s

## How to find a place in the country

### THE CONTRIBUTION OF UNIVERSITIES TO INTEGRATED RURAL DEVELOPMENT

Delegates in the working group on this topic were not satisfied with a thorough investigation of the subject: they wanted action. Their final report included a plea to the executive of the Association of Commonwealth Universities to authorize the production of a compendium listing the organizations active in the field and the programmes undertaken in the universities.

Sir Robert Steel, former principal of University College, Swansea, and chairman of the group, said that the project would precipitate communication in a vital area. The hard pressed ACU secretariat could not be expected to take on the work but there was reason to believe one or two charitable trusts might help.

The topic, said Sir Robert, was the most important on the agenda for many Commonwealth countries and required an interdisciplinary approach. It was not simply a question of improving agricultural efforts; comprehensive development was required. The group was anxious to ensure that societies in the countryside received at least equal attention to those urban areas.

One problem identified by Sir Robert and dealt with in the several papers put to the group was the fact that most universities were urban institutions. "Students must be fired with a sense of vocation and mission so that more will see their work in the rural countryside," said Sir Robert.

Dr B. D. Sharma, vice-chancellor of the North Eastern Hill University in India, elaborated on these difficulties. "Even those institutions set up with specific orientation have not been able to break from the ethos of general universities in respect of the expectations of their graduates," he said.

"The agricultural graduates are keen to have a place in research organizations, extension agencies or other developmental institutions and participate in agricultural development as researchers or advisors rather than go to the village and engage in agriculture."

The rural universities also had difficulty in recruiting the best students because applicants saw the danger of not being qualified for jobs in the modern sector of the economy. All Indian universities were caught between conflicting pressures, from the students wanting the traditional liberal education on one side and the opposite demands of the economy on the other.

In other Commonwealth countries the demands of rural development were not in doubt but the best methods of satisfying them were still in dispute. Deryka Beshaw and Ann Thomas, of the University of East Anglia, entitled their paper *Safety in Theory or Danger in Practice* because they saw an implied contradiction between the two.

But, they argued, universities, especially in the developing countries, had a responsibility to direct a proportion of their research and other activities towards the needs of the rural poor, even if the work involved was not of the type traditionally associated with the role of the academic. University staff should be involved in research, training and executive work. In the full knowledge that new institutional arrangements might be needed.

The group was particularly concerned with the universities' potential for assisting rural communities through the development of the most appropriate technologies for their needs. In India, for example, important modifications had been made to bullock carts and another paper described the benefits of university assistance for Sri Lankan fishermen.

But even this came back to an inter-disciplinary approach because of the need for communication with the villagers concerned. As one paper put it, the primary role of the university in rural development should be as a think tank and planning body.

N.C.

J.O.L.

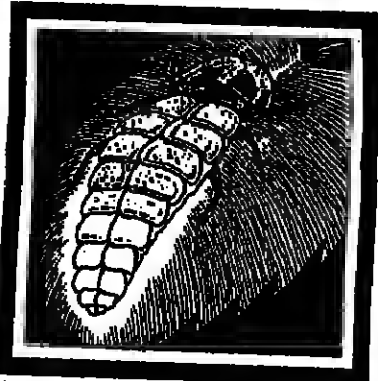


Even 20 years ago, innumerable school-children who opted for biology were being urged not to give up physics because "it will help you understand the instruments we use". Today, the links between biology and the physical sciences are even stronger, particularly in the field of protein chemistry, a cross-disciplinary subject usually studied as part of a degree in biochemistry or biophysics.

Although elementary topics in protein chemistry—structure and function of enzymes, antibodies, haemoglobin etc.—are now discussed even in O level biology, in-depth study requires considerable insight from both biological and physical sciences. The methodology of protein chemistry derives from physics and chemistry, while the information it produces now underpins large areas of biology, physiology, medicine, toxicology, biotechnology, pharmacology, botany, zoology etc.

At the molecular level, proteins control the chemical reactions responsible for growth and maintenance of the cell—the anatomical building block of all living organisms. Together with the polysaccharides and nucleic acids, they make up the macromolecules of which cells are composed. Proteins are synthesized by stepwise addition of small-molecule building blocks, the amino acids. Different proteins may have molecular weights from one to several hundred thousand, and they occur in the cell not as elongated chains but in compact folded form.

The key to their biological role lies partly in the nature and order of amino acids in the chain and partly in the three-dimensional shape of the folded, biologically active molecule. This shape approximates to a sphere with precisely defined surface geometry—rather like the wrinkled surface of a walnut, with every day and protruberance defined. The control role of proteins in biology derives from the enormous selectivity of their surface

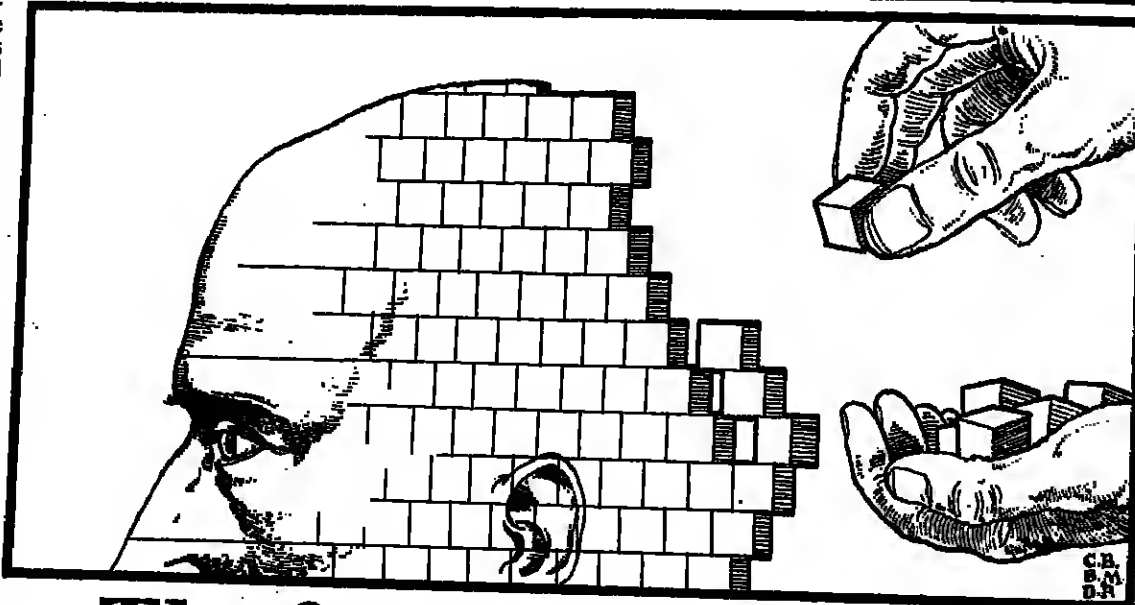


interactions. Only molecules whose surfaces are complementary to selective "active site" areas on the wrinkled protein surface will interact with it. This molecular recognition system underlies the biological activity of all proteins—be they enzymes, antibodies, hormone receptors or structural proteins.

Much of protein chemistry is concerned with structure-function studies, trying to relate the biological activity of a protein to its surface geometry and to the subtle changes this may undergo during cellular activity. Basic research, therefore, comes under the general long-term aim of better understanding in molecular terms of how living organisms operate in health and disease. However, biotechnology is now adding further incentive to applied research in protein chemistry.

Biotechnologists are particularly interested in enzymes, the catalytic proteins that control chemical reactions within the cell. These reactions enable living organisms to harness and store energy from the sun and use it to convert simple carbon and nitrogen compounds to complex intermediates, channelling them through a web of interlocking chemical reactions to numerous different end products. These multi-step conversions are made possible only by the selectivity of the enzyme proteins which catalyse each step in the reaction sequence.

Protein chemists aim eventually to relate the structure of enzymes to their high specificity and catalytic efficiency, hoping thereby to understand their central role in cell chemistry. The characteristic symptoms of several "metabolic" diseases for instance can now be traced to malfunction of single key enzymes. Other incentives are commercial: industrial chemists have long used enzymes to accelerate chemically demanding steps in the



## The foundations of life

Protein chemistry lies at the heart of our understanding of the biological sciences. Anna Furth describes this important cross-disciplinary subject and its application in industry, medicine and basic biology

manufacture of drugs, foodstuffs and other products.

The use of enzymes in cortisone manufacture has enormously simplified the production procedure, reducing costs so that the drug's market value has fallen considerably. Early industrial processes used entire cells and their battery of enzymes, for example in the conversion of sugar to alcohol by brewer's yeast. However, the trend nowadays is to extract individual enzymes from the cell, immobilize them on inert supports and use them to catalyse particular steps in production.

The attraction of enzymes lies partly in their high specificity and partly in their modest working requirements. Expensive and corrosive items such as high temperatures, pressures and acidity can—and must be avoided. Expertise in protein chemistry is needed to develop ways of extracting enzymes from their cellular environment without destroying the surface geometry on which their properties depend.

Enzymes are no longer the only proteins to be exploited commercially for their powers of selectivity. Recent years have seen an explosion of interest in antibodies, the serum proteins synthesized by the body's defence system, on invasion by foreign material. Bacteria, viruses and—under experimental conditions—even small molecules, can stimulate production of specific antibody proteins.

The biosynthesis of specific antibody proteins is a remarkable system, allowing the body to distinguish foreign molecules from similar molecules within its own cells. Autoimmune diseases like arthritis are thought to result from breakdown in this fail-safe self-recognition mechanism. Successful vaccination against diseases such as polio

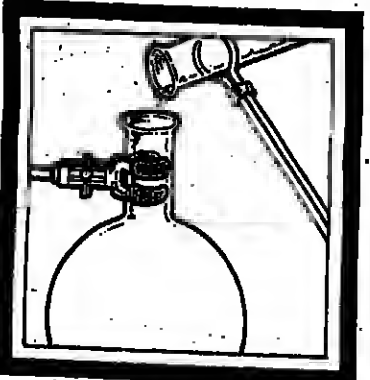


makes use of another feature, the ability to "remember" previous encounters with a particular foreign body.

The control mechanisms underlying the synthesis of antibodies and their mode of action are thus extremely important for our understanding of natural immunity, vaccination, tissue transplantation rejection etc. The discipline of antibody protein chemistry forms part of immunology, a rapidly expanding subject which, in the past 10

years, has had a major impact on all branches of biology. Not least has been the emergence of the antibody protein as a major new biochemical tool.

Modern medicine requires high specificity methods for detecting small quantities of drugs, hormones, cancer-specific proteins and other compounds in serum and urine. Conventional chemical methods are too insensitive,



and hospital laboratories are increasingly making use of immunoassays, where the key reagent is an antibody protein, synthesized under conditions which give it a surface binding site exactly complementary to the compound to be measured.

For many immunoassays, the antibody must then be "labelled" for easy recognition, usually by incorporating a radioactive or fluorescent atom into its structure. Therefore to develop a successful immunoassay requires insight into the cellular mechanisms by which antibodies are produced and also an ability to chemically manipulate the antibody protein without destroying its surface geometry. Through immunology therefore, protein chemistry is making a great impact on diagnosis and monitoring in medical and related sciences, wherever small quantities of specific compounds must be assayed in the presence of contaminants.

Much of protein chemistry is still directed at studies on proteins of no obvious commercial or medical application. These include the receptor proteins which interact specifically with messenger molecules from other parts of the organism, or even from outside it—in the sense of smell. The majority of receptor proteins are embedded in the cell's membranes surrounding the cell and until recently were difficult to isolate for study in intact form.

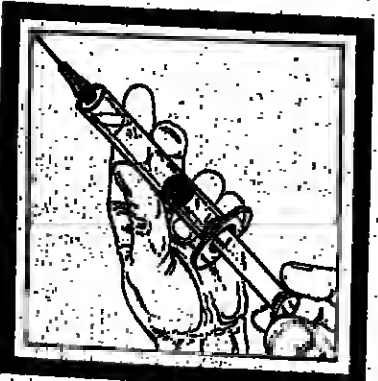
With new techniques we are now beginning to understand how receptor proteins function, how they relay messages into the cell, and how this information might be used by man to answer such questions as: Does diabetes arise from lack of natural insulin, or from poor receptor action? Can heart muscle be used to decay dormant "resting" members of the opposite sex?

Proteins also have specific interaction sites for nucleic acids, the genetic material of the cell responsible for growth and heredity. A better understanding of the mechanisms of protein-nucleic acid interaction could tell us what controls growth in normal and malignant cells. Finally, proteins bind to one another, aggregating into enormous molecular assemblies that eventually become recognizable as characteristic cell structures, visible under the microscope—chloroplasts, mitochondria, cell nuclei etc.

Until recently the techniques available to protein chemists enabled work on only comparatively simple small proteins, such as the water-soluble enzymes, and the oxygen-carrying pigment haemoglobin. Nowadays we are beginning to understand the mechanisms by which proteins interact with one another, and thus control the self-assembly of living cells from their constituent macromolecules.

Ever since it emerged as a specialist subject, protein chemistry has been particularly dependent on techniques. Indeed, major advances have followed almost automatically from new methodology, and Nobel prizes in this field—of which there are many—tend to be awarded as much for innovative technology as for its applications.

Specialized techniques are needed not only because of the structural complexity of proteins, but because of their paucity and fragility. To purify even a few milligrams of some of the cells more interesting proteins may require careful processing of several



hundred grams of tissue, carefully avoiding the high temperatures, acidity and other conditions which destroy proteins. But even greater ingenuity is needed for structural studies on the purified protein, which may be some hundred thousand times larger than a simple organic chemical.

Protein structure is analysed at two levels. The first concerns the grouping of constituent atoms into chemically functional groups and the sequence of amino acid building blocks (each with

some 100 odd atoms) along the protein chain. This sequencing is generally a collaborative effort, once equivalent to about one "person-year" of work per protein but now often largely automated.

The first complete sequence, that of 51 amino-acid-long insulin, was determined by the Noble prize in 1958. Since then many hundreds of proteins have been sequenced, though nowadays the need is to sequence the gene segment coding for a protein, rather than the protein itself—an approach undreamt of even 10 years ago.

Determining the chemical structure of a protein is costly on chemical and technical time, but nowhere near as expensive as techniques for studying the chain folding pattern which produces the surface geometry responsible for biological activities. Even the largest proteins appear as indistinct blobs under light or electron microscope and their structures would have remained obscure but for major technical advances, made available by physical scientists interested in biological problems. For example, X-ray, neutron and electron diffraction by specially prepared biological specimens have yielded detailed information on the interlocking of protein molecules to form subcellular structures and on the three-dimensional configuration of individual protein molecules.

Pure biologists are unable to cope with the underlying physical principles and mathematical manipulations, while pure physicists have not been trained to prepare biological material. The project requires collaboration between biological chemists able to produce suitable forms of the protein and physicists bold enough to take on the enormous complexities of biological material. Furthermore, even the smallest protein generates a massive quantity of diffraction data and although early studies, such as those on myoglobin and lysozyme in the early 1960s, were published before the age of



powerful computers, modern structure determination relies heavily on computer backup.

The expense for these studies for a suitable electron microscope, for NMR facilities and for a single neutron diffraction experiment on the cyclotron at Harwell or Geneva may be enormous. The "centre of excellence" principle established in the Rothschilde report is therefore likely to continue with the Medical Research Council unit at Hills Road, Cambridge (home of Nobel prize winners Perutz, Klug, Sanger, and leading structural work in this country).

Expensive chemicals and standard equipment such as preparative centrifuges and spectrophotometers are needed for even the least ambitious projects, but it is essential that research in this field should continue. More work is needed to exploit the knowledge we already have, as in the industrial applications of enzymes and—another area where we are all in advance of the ever-successful Japanese—the use of monoclonal antibodies.

Although the basic principles of protein structure are now largely understood, thanks to intensive efforts over the past 20 odd years, basic research is still needed to move up the scale from individual proteins to large protein-based aggregates; these might include the light harvesting centre in plant chloroplasts, protein-nucleic acid aggregates to chromosomes, and other subcellular structures. Despite its reliance on chemistry and physics, protein chemistry lies at the heart of our understanding of the molecular basis of biological science, with applications in industry, medicine and throughout basic biology.

The author is lecturer in biology at the Open University.

## Bruce Collins looks at disillusionment which has dogged American blacks since emancipation

It would be ironic if the bicentennial of America's federal constitution were to be celebrated in 1987 with a black as vice president. Unlikely as well, most observers would say. Yet Harold Washington's mayoral success in traditionally unalighted Chicago has lent weight to the "it's our turn" rhetoric of black American politicians. There is serious discussion of the Reverend Jesse Jackson's running for the Democratic presidential nomination; Martin Luther King's disciple will not win that slot, but he might just become part of a "dream ticket".

That blacks are pressing for a candidate of their own reflects disillusionment with the effects, or non-effects of the policies of the 1960s. The last twenty years' undoubted and often dramatic advances for middle-class blacks have still not disbanded the ghettoes or heavily depressed the correlation between blackness and deprivation. Subsequent disillusionment even with the Democrats has produced the claim of some influential black spokesmen that only a candidate from their midst can galvanize the ghetto people to register and to vote.

This pattern of high hopes unfulfilled and dreams of racial improvement unrealized has twice occurred on a major scale in American history. The Reconstruction experiment of the 1860s and 1870s achieved much. But it was counter-balanced for the vast majority of freed blacks by the economic and political blight settling in from the 1880s and especially the 1890s, and black disfranchisement, lynch law and debt peonage became the new normal. Before that, blacks experienced another false dawn in the slipstream of the Revolution. For in the summer of 1783, as American states were about to secure their formal independence, serious Southern consideration was given to emancipation.

The coincidence of the American Revolution and slave emancipation has been much examined by historians. It is of great initial importance. War itself interrupted and curtailed slave trading and made Northern states' emancipation laws, typically gradual in their impact, easier to pass. The contradiction between their own talk of equality and liberty in the 1770s and the prevalence of slavery struck Americans in the northern states, and even in the plantation South, in increasingly hard. As natural rights ideas were enlisted to American service, so they took wider effect.

And Enlightenment precepts, imported pre-packaged from Europe, worked against continued enslavement. Such ideas operated first in the northern states, where slaves were few in number and concentrated in cities. Vermont, not much affected by slavery, led the way in 1777 with a constitution prohibiting slavery; in the 1850s Vermont was to be the state most opposed to slavery extension. Pennsylvania in 1780 enacted gradual emancipation, and in 1783 Massachusetts, and England did earlier, banned slavery through judicial decision.

Virginia (though was the principal slave state, in population, in wealth, in prestige. Its leaders were of national stature. Washington admittedly was an absentee Virginian during the hostilities; Virginia's wartime governor, Thomas Jefferson, did not meet the general between 1776 and 1783. Yet Jefferson himself, though staying put in his home state, was widely enough known and well enough regarded to be nominated as one of the five American peace commissioners in 1781. James Madison, serving in the Continental Congress, was in close correspondence with Jefferson in 1782/83, forging the partnership that was to carry both to the presidency. Both were men of formidable intellect and Madison was learning his trade as a parliamentarian.

More pertinently here, neither man committed to slavery. Of course, slave ownership was part of their life style. Yet both took a long-term and reasonably detached view; just as Jefferson was sufficiently detached to avoid personal financial involvements in western land companies that might have clashed with his political responsibilities over western lands.

The clearest manifestation of Jefferson's view came in June 1783 when he drafted a proposed new constitution for Virginia. Jefferson, repelled by property and humanitarian interests. No slaves then living in Virginia would be freed by constitutional require-



Thomas Jefferson (left), Benjamin Franklin and John Hancock leave Independence Hall in Philadelphia after signing the US Declaration of Independence

## The long, hard road to freedom



Harold Washington thanks supporters after winning the mayoral primary. With Washington are his fiancée, Mary Smith and the Reverend Jesse Jackson, who may run for the Democratic presidential nomination.

ment. But all children born to slaves after 1800 were to be free at birth. No thought appears to have been given to the effect of infant emancipation upon slave parent-child relationships; or to many slaveowners' probable indifference to the feeding, clothing and care of their slaves' children when such offspring no longer represented a capital asset. Yet the advantages of distant emancipation were obvious. Slave financial outlays were not required. Owners would enjoy a full 17 years' slave labour and slave breeding before the letter source of income was cut off. Some slaves living in 1783 might still have been at their chores in 1840. Property rights were scarcely assailed. Even allowing for this necessary pragmatism, however, Jefferson's position was an extraordinary one for so prominent a politician in so important a slave state to adopt. Truly, the future for Virginia's blacks—or rather their children or grandchildren—seemed propitious in 1783.

Willingness to propose emancipation owed as much to practical as philosophical considerations. War unsettled blacks. Virginia's last royal governor, Lord Dunmore (who has left us a more enduring monument to his imagination in the shape of a giant stone plume near Alrith, Stirling), was the first to embrace emancipation; he promised freedom to slaves who deserted their rebel owners. In the early 1780s the upheaval that accompanied British military defeat as Loyalists left for the colonies that became Canada or for British Caribbean islands, helped create an atmosphere almost of post-war reconstruction. Some slaves accompanied Loyalist owners in their exodus. Some formed part of the departing British army's booty; when the South's most illustrious pre-1860 novelist, William Gilmore Simms, wrote a popular history of South Carolina (1840), he was especially eloquent against this British

seizure of American slaves. In addition, some blacks fought in the American cause; and slaves among them gained their freedom. Of blacks achieved more in the Civil War and the Second World War (a desegregated army followed the latter), they still won something from the Revolution. The French presence after 1778 and particularly in 1781, may have encouraged a man so sensitive to international opinion and so sympathetic to French ideas as Jefferson to look upon his home state with an outsider's eye. His most explicit arguments against slavery were, after all, written in 1781 in answer to French inquiries and later expanded for European not American publication in 1785. Wartime material losses (Jefferson claimed twelve slaves lost through a British raid in 1781 and its consequences) and wartime disruption of production dependent on slave labour may have allowed Jefferson a more detached view of domestic affairs. It is possible also that Jefferson and Madison wanted to keep Virginia in step with emancipation movements farther north; to avoid on excessive sectional divergence on important issues.

Both were intensely worried at the prospect of the American states simply drifting apart. In February, 1783 Jefferson confided: "I find also too pride of independence [is] taking deep and dangerous hold on the hearts of individual states. I know no danger so detrimental and so probable as that of internal contests. And I know no remedy so likely to prevent it as the strengthening the bond which connects us." Finally, and this inspired his proposal for a new constitution in 1783, Jefferson appreciated that the moment of flux and post war reconstruction would not last long.

A major change had been enacted by Virginia's legislature the previous year. Since 1723, manumission of slaves had been conditional upon the

consent of the governor and council, consent grudgingly given. In 1782, however, this restriction of slaveowners' property rights was lifted; manumission could be granted at the owner's will. The response, while an impressive enough testimony to some slaveowners' antislavery feelings, was not of revolutionary proportions. Between 1782 and 1790 the state's free black population rose from about 3,000 to about 13,000, whereas black Virginians numbered a quarter of a million in all. Going from private manumission to general, if glacial, emancipation would require a long stride forward. Yet commitment to manumission waned after the promising, though modest, start of the 1780s. In 1793, Virginia's legislature forbade free blacks to enter the state. Efforts to end private manumission only just failed in 1805 and 1806.

Toda later reaction against free blacks was fuelled by anxieties about free blacks' subservience which had long existed. Such anxieties were made explicit by a black rebellion in Saint Domingue (1792) and by Gabriel Prosser's planned slave rebellion in Richmond (1800). These events, as the Indian Mutiny of 1857 was to do in Britain, were taken as justifying virulent white racism and strengthened the idea that a free black population would not peacefully coexist with whites.

Some historians have contended that much of the humanitarian and religious impetus behind anti-slavery was a reaction against the horrors of the slave trade; the end of transatlantic slave trading set many white consciences at rest. Other historians have stressed that economic conditions in the 1780, with a surplus of labour for tobacco's needs, encouraged humane responses, whereas the extension inland of cotton growing after 1793, with the invention of the cotton gin in that year, set up new and apparently insatiable demands for slaves. Yet these explanations

for a reaction against black freedom assume that the circumstances of 1782/83 favoured the advance of black liberty, an assumption at best but half warranted.

As Madison was at the Continental Congress, Jefferson maintained a lengthy correspondence with him in 1782/83. In June 1783 he sent his draft for a new state constitution to his colleague. Madison's thoughtful and long reply made no reference to the proposed emancipation. So, too, Jefferson's papers for 1782 and 1783 contain nothing urging the anti-slavery cause. Washington in February commented that the prospect of peace "anxious, or seems to do so, every other consideration among us". Madison fretted repeatedly over the Confederation's finances, debt funding, and inter-state relations; he also fought in Congress to defend Virginia's claims to lands beyond the Appalachians. Even when immediate political matters were put aside, the subject of slavery merited little attention. In early 1782, Jefferson was asked to become a councillor of the American Philosophical Society, at Philadelphia. On asking further about the place of honour, he was informed of the wonders that were open to "the philosophic view". On political and social questions: "Our governments are yet unformed and capable of great improvements in police, finance and commerce. The history, manners and customs of the Aborigines are but little known." None of this suggested that the Revolutionary intelligentsia were to focus their enlightened attentions upon the prospect for emancipation. Nor did Jefferson itch to play his part in state legislative affairs; he declined to take his seat in the Virginia house in May 1782. And when he commented in the following year on the legislature's work of 1782 he merely complained of its low calibre and lack of interest in general constitutional reform.

Just as the intellectual tide did not seem to be running very hard in an antislavery direction, so the actual number of private manumissions did not suggest that the economic trade winds were blowing against slaveowners' vested interests. Statute condemnations of the act of 1782 and strong support for property rights in slaves—conveyed to the legislature in 1784 and 1785 in a flood of petitions—showed that the humanitarian case against slavery was far from being in the ascendant. Moreover, while the closing years of the war offered opportunities for change, the very fluidity of affairs—Virginia had been invaded in 1781, slaves had been stolen, Loyalists had departed, the future of the Confederation was uncertain—raised problems calling for speedy solution more loudly than long-term thinking about slavery.

For these reasons, emancipation remained but a faint promise. Again as Davis has said: "Jefferson had only a theoretical interest in promoting the cause of abolition." While he believed sincerely that slavery should end, he was too intellectual, too gentlemanly, too detached to translate the conviction—one among many others—into an active cause. He would not have agreed with the impassioned antislavery polemicist, Charles Sumner, in 1850, that the Senate was "a mighty pulpit from which the truth can be preached." Jefferson was too much a rationalist to preach, and too aware of racist prejudice in the South to see swift emancipation as a possible alternative to servitude. Given all that, and the rush of other, more pressing, events in 1783, the emancipation proposal was simply slipped into a draft constitution that was never formally considered; it initiated no contemporary debate and its originator went off to the Continental Congress and, in 1784, to France. As Jefferson himself had been told earlier by a leading revolutionary: "I am sensible that plans of public utility however promising and pleasing they may be, are the first appearance, soon grow languid unless it be the particular business of some men or set of men to urge them forward."

And so the events of 1782/83 and their aftermath have a certain resonance today. For as the plans of the 1960s for improving the ordinary blacks' lot have lost momentum, so black leaders increasingly feel that the best men to urge things forward might indeed be blacks themselves. It is about time that they were given their chance to try.

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## BOOKS

### Pieced together

Editing Yeats's Poems  
by Richard J. Finneran  
Macmillan, £21.00  
ISBN 0 333 33966 5

To be the widow of a great poet is often to incur a heavy responsibility. Mary Shelley is known to literary history not only as the precociously brilliant author of *Frankenstein* but also as a pioneering editor, responsible if not always reliable in her reconstructions of Shelley's perplexing and tangled manuscripts.

One might well think that in such editorial burdens would have troubled the sleep of Mrs George Yeats when her husband died in his bed at the age of seventy-four, since most of his poetry was already in print or in proof. One might imagine, too, that the canon of Yeats's poetry has now been established with some security even if the abundant and fascinating evidence of the manuscripts has not been exhausted. But one would be wrong in both cases as Richard Finneran demonstrates in this highly compressed handbook, which is intended to illuminate his forthcoming and much-needed edition of the poems of Yeats.

To begin with, the edition of 1949 which was labelled "definitive" might more properly be described as defective. Its history is interesting. Throughout the thirties Macmillan had been in the process of preparing a new edition of Yeats's works with the assistance of the poet. For a variety of reasons, including the outbreak of war, this eleven-volume edition was never published although the fluctuations of the enterprise did lead to the publication of *Collected Poems* in November 1933. Then in 1949 Macmillan produced the "definitive edition" of the poems with the active and conscientious collaboration of Mrs Yeats, who believed that it incorporated the final intentions of the poet. The prospectus unequivocally affirmed: "For some time before his death, W. B. Yeats was engaged in revising the text of this edition of his poems, of which he had corrected the proofs." Eventually this edition provided the basic text for the invaluable variorum edition of Aspel and Allt. Yet, in spite of the seemingly authoritative imprimatur, the "definitive edition" is imperfect in contents, in editing and in text. It is Professor Finneran's task to try to succeed where Mrs Yeats and the editors of Macmillan fell short of editorial perfection.

His edition has had to be pieced together from the rich, complicated and sometimes conflicting evidence of printed editions, revised printings, corrected copies, typescripts, correspondence and, in one case at least, alleged deathbed revisions. A good deal of this evidence was ignored in 1949, or, incorrectly interpreted, Professor Finneran steps carefully here, as well he might. His editorial methodology is eclectic in the best sense: that is, he very properly recognizes that different texts or even different poems may require different strategies if he is to approximate to the poet's intention. He admits that the operation of this is hazardous and he quite explicitly disavows the title "definitive" for his own edition. Such modesty is not only the result of the sad history of the 1949 *Poems* and of his own (quite humble) failure to locate numerous materials which may yet come to hand; but it also acknowledges the fact that editing of this nature cannot aspire to mechanical perfection. Sometimes Professor Finneran is inclined to be too coy even when his reconstruction of textual history might seem to entitle him to a less hesitant gesture. "I suspect that some readers will prefer the comma at the end of the first line, sounds a defensive note which is all too common. On the other hand, those critical judgments which, no, is occasionally impelled to pronounce might best be delivered with a modest lack of assertiveness."

Where, then, does this leave the reader of Yeats's poetry? Without the

complete text it is not possible to make a properly informed judgment but the initial indications are that, like the recent edition of Hardy, Professor Finneran's Yeats will provide much fascinating evidence of textual history but that the substantive improvements in the text will not be very numerous or very significant. "Under Ben Bulbin" now takes its place at the beginning of *Lost Poems* as Yeats intended while the other last poems are reordered: "The Man and the Echo" becomes "Man and the Echo"; "The Statues" is now correctly dated; "Three Songs to the Same Tune" is properly regarded as an earlier version of "Three Marching Songs" and is no longer printed as a poem in its own right; Mrs Yeats's note on the significant shift to a seven-line stanza in "Cool Park and Daltry," 1931 is no longer implicitly attributed to Yeats; last and not least dance attendance rather than attention on the old age of the poet. There are other verbal improvements or changes of substantive import yet the overwhelming impression is that the major

ity of changes are concerned with punctuation. Like many another poet, Yeats sometimes affected helplessness in such matters. He once told his editor: "I have never been able to punctuate properly." . . . I suggest that in the remaining volumes you do not query your corrections." Yet the evidence of this edition demonstrates abundantly that punctuation was much in his mind and shows that, though his practice was sometimes grammatically incorrect, it was often functional and sometimes surprising.

One can't help reacting to this slender volume not as a prolegomenon but more as one might to a handbook for car drivers which one can purchase without the car. The diagrams have a frustrating abstraction and unreality about them unless one can experience the feel of the car on the road.

Timothy Webb

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## 'Nature worship'

The Wilderness Pleases: the origins of Romanticism  
by Christopher Thacker  
Croom Helm, £22.00  
ISBN 0 7099 2409 7

Dr Thacker takes his title from *The Moralists* (1709), where the philosopher Shaftesbury allows one of his characters to exclaim:

"The wilderness pleases. We seem to live alone with Nature. We view her in her inmost recesses, and contemplate her with more delight in these original wilds than in the artificial labyrinth and feigned wildernesses of the palace."

This, Thacker rightly claims, was a significant acknowledgement; the following century saw many forms of "response" to Shaftesbury's view of the "wilderness" as one of the more extreme forms of a practical outlet in the political and social violence of the French Revolution.

*The Wilderness Pleases* offers to chart the myriad forms of the sublime, the primitive, "nature-worship", bardic poetry, the noble savage, all of which and more Thacker sees as somehow deriving from Shaftesbury's seminal statement. There is first a chapter on what is called the "status quo", where we are introduced in just under nine pages to that world view which Shaftesbury's statement was said to censure: a man-centred, universe, answerable readily to reason, a world of family and nation rather than isolated man and countryside. Inevitably, subtleties elude such endeavours: there is no room, for example, for Petrarch or Plutarch among "the indifference and hostility of earlier centuries towards nature"; nor is there mention of Shaftesbury's own taste for regular garden designs at Wimbome St Giles.

There is indeed much to object to in 'the chapters that follow; but Thacker surveys his vast territory with a cheerful authority, some occasionally fierce perspectives which derive largely from his wish to see Romanticism in its European context and, in one case at least, alleged deathbed revisions. A good deal of this evidence was ignored in 1949, or, incorrectly interpreted, Professor Finneran steps carefully here, as well he might. His editorial methodology is eclectic in the best sense: that is, he very properly recognizes that different texts or even different poems may require different strategies if he is to approximate to the poet's intention. He admits that the operation of this is hazardous and he quite explicitly disavows the title "definitive" for his own edition. Such modesty is not only the result of the sad history of the 1949 *Poems* and of his own (quite humble) failure to locate numerous materials which may yet come to hand; but it also acknowledges the fact that editing of this nature cannot aspire to mechanical perfection. Sometimes Professor Finneran is inclined to be too coy even when his reconstruction of textual history might seem to entitle him to a less hesitant gesture. "I suspect that some readers will prefer the comma at the end of the first line, sounds a defensive note which is all too common. On the other hand, those critical judgments which, no, is occasionally impelled to pronounce might best be delivered with a modest lack of assertiveness."

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Timothy Webb

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## One side of the statue

Pound's Cavalcanti: an edition of the translations, notes, and essays  
by David Anderson  
Princeton University Press, £21.70  
ISBN 0 691 06519 5

"The translation of a poem having any depth," Pound once wrote, "ends by being one of two things: Either it is the expression of the translator, virtually a new poem, or it is as it were a photograph, as exact as possible, of one side of the statue." Theoretically, then, he did not expect the process of translation to be completed by a single rendering; indeed, on another occasion he remarked of an Italian sonnet that "it would take several translations and some comment to exhaust the beauty of the original."

As a translator of early Italian poetry, Pound had a formidable predecessor in Dante Gabriel Rossetti, and as far as "melodious" dupes for the original, were concerned, Pound accepted Rossetti's renderings, as definitive. His own versions, however, he conceived not as depictions but as dragomans, as guides to the originals, and therefore he normally had them printed with the Italian text. He emphasized that his endeavour was "to present the vivid personality of Guido Cavalcanti" and sought to achieve this by "driving the reader's perception further into the original, clarifying the 'exact significance of such phrases as the death of the heart' and the departure of the soul"; thus countering the "derivative convention and loose usage" which over six hun-

dred years has obscured them.



Yeats, a photograph by A. L. Coburn, 1908.

dred years has obscured them.

Cavalcanti occasioned Pound's most sustained and most fruitful enterprise as a translator. At 24 or 25 the American announced his apprenticeship to "Ser Guido of Florence, master of us all". A quarter of a century later, in the thirty-sixth of his *Cantos*, he published his second version of Guido's most challenging composition, *Donna me prega*, closely related to Pound's own metaphysics in that it embodies the notion of creative memory. In the intervening years he translated and re-translated almost the whole of Guido's *oeuvre*, in one case executing no less than four distinct versions. A volume containing fifty poems in bilingual format came out in 1912; and a bilingual *omnia* opera was planned for 1929 but failed to materialize, though parts of it appeared separately.

With Pound, Cavalcanti shakes off his Pre-Raphaelite romanticism; the author not the publisher has asked himself what audience is addressed by these poems. At once too complex and ambitious for readers who need an introduction to the themes of the sublime, the individual or the poetic, it is not intricate or analytical enough for those who want to see the poet's work as already books which make the topic more accessible and inviting; for the latter, old and recent works against which *The Wilderness Pleases* can only be judged as disappointing.

John Dixon Hunt

John Dixon Hunt is professor of English literature at the University of London.

One of Professor Anderson's purposes in the present volume is to assemble the whole of Pound's Cavalcanti, published and unpublished. The poems appear in the sequence in which Pound encountered them, and with all his surviving translations of each, which means net gain in print of 14 finished renderings; they are also furnished with an extensive apparatus to both the Italian and the English texts, in the latter case often yielding further independent versions of substantial passages. The prose component consists of the various forewords and prefaces, the introduction to the 1912 collection, and the notes and essays intended for the edition of 1929.

Anderson's other purpose is to present these writings, and their novelties, as "a single, long-running experiment in literary form" - in the form, that is, of the facing-page translation accompanied by explanatory prose.

The editor seems unnecessarily intrusive when he provides his own renderings of two sonnets Pound did not translate and (without supplying the original) of a preface Pound published in Italian, particularly since his grasp of the intended sense is not beyond question. But, with this one reservation, the volume is a paragon of judicious scholarship.

John C. Barnes

John C. Barnes is head of the department of Italian at the University of Aberdeen.

## Restoring urgency

"St Mawr" and Other Stories  
by D.H. Lawrence  
edited by Brian Finney  
Cambridge University Press, £15.95  
ISBN 0 521 22365 6

The Cambridge edition of the works of D.H. Lawrence eventually provides a full and accessible set of Lawrence texts, of a unparalleled for accuracy and completeness among modern writers, paralleled because in most cases necessary; with Lawrence, however, is often exceedingly difficult to determine exactly what constitutes "text" of a given work. The English or first American editions frequently differ; the manuscript typescript, or corrected proof, edition as amended by Lawrence for publication purposes, or the one he wished to publish?

These questions, of course, are a greater or lesser degree of writers, but with Lawrence's quite an extreme case. This is partly due to his peripatetic, looking a permanent address, frequently unavailable to correct proofs, or to do proof-reading, and to correct changes made at a level and without his approval. The editor of the Cambridge edition of Lawrence's texts is "remains certain well-known cases, like *Sons and Lovers*, this is unquestionable, and it is also likely that new versions of *The Rainbow* and *Women in Love* will significantly alter our reading of those novels.

*St Mawr and Other Stories*, others being "The Prig" and two fragments "The Wild Wood" and "The Flying Fish", is, however, not a particularly remarkable case of the need for new texts. The novel *St Mawr* was written in the number of minor works, and torn to it in a sentence referring to the goutsiness of the Prince Regent, which was suppressed in the first edition. Similarly, the three other stories, *The Prig*, *The Wild Wood*, and *The Flying Fish*, were also suppressed in the first edition.

The major modification of the text of all of the texts that are included, consists of a restoration of Lawrence's original punctuation, especially with regard to the dash, which characteristically inserts between clauses, which was generally removed in the first edition. The effect of this is to restore the habit, which is so frequent in Lawrence's letters (and in Pound's letters in English to and from Lawrence) for immediacy and quickness, and to restore to the stories a kind of urgency that does provide a new element of sense of them.

The format, typography, and scholarship demonstrated in this edition seem to me exemplary, and not entirely trivial exceptions. The first, although the introduction to the volume presents its footnotes, the bottom of the relevant pages, the back of the volume, and the back of the book, the text is in the text.

Having made constant reference to the notes, one is left wondering whom they are intended. Sometimes they are helpful scholarly indications of manuscript readings that were different, later, or of deviations from the text; more frequently, however, they supply information that seems generally to be of ignorance among modern formalists, and such were the philosophical concerns, did the pioneering work in the philosophy of what he had invented. And, after him, Russell, Carnap, Quine, Strawson and, above all, Wittgenstein in his two periods, have assumed to know about Wittgenstein's philosophy, the *Philosophical Investigations*. There are, too, many frequent speculations as to the "truth" for the characters in the stories, which even when accurate are of minor sources of irritation, but are enough substantially to diminish one's admiration for this new edition, and definitively, arrived.

R.A. Gekoski

R.A. Gekoski is senior lecturer in English at the University of Warwick.

## BOOKS

### Coherent logic

An Introduction to Philosophical Logic  
by A.C. Grayling  
Harvester Press, £19.95 and £6.95  
ISBN 0 389 20299 1 and 20300 9

Philosophical logic, as Grayling conceives it, is a branch of pure philosophy, to be ranked alongside general metaphysics, philosophy of mind, and epistemology, and to be contrasted with applied philosophy: the philosophies of science, history, mathematics, morals, aesthetics, psychology and indeed of logic itself.

The distinction is well taken. The study of pure logic inevitably leads to certain philosophical concerns: with entailment, the nature of logical truth, the character of the "logical constants", and so on. These questions belong to the philosophy of logic. In thinking about them, one is seeking philosophical understanding of the nature of logic. However, logic conceived as the very practice of making inferences, is not the province (merely) of algebraic specialists but is of the essence of our rationality and hence constitutive, in part, of what it is to be human. The formal logician's title to be concerned with logic, properly so described, thus remains perpetually answerable to the relation obtaining between his formal theories and our pre-theoretical inferential practices.

Roughly, his formal languages have to be capable of representing the essential mechanics of what we count as sound inference in natural language. Thus the philosophy of logic is forced to initiate into concern with general questions concerning those aspects of the semantics of natural language which bear on its capacity to serve as a medium of sound inference. And the philosopher of logic is rapidly embroiled in questions which, rather than revolving round the specific technical concerns and concepts used in pure logic, concern the nature of inference and of rational thought itself. What is the nature of the objects from and to which one infers? Sentences, statements, propositions? What is the right account of the apparently necessary soundness of those inferences which are sound, and of our knowledge of this necessity? When, and to what extent, is the formal logician entitled to discern a logical structure in sentences of natural language distinct from their overt grammatical structure - in particular, is the prevailing orthodoxy that "exists" is not a logical predicate defensible? What is the proper philosophical conception of that property, viz truth, which inference is geared to preserve? Finally, what confers generality on a sequence of marks or sounds, and so renders it susceptible to serve as a source, or terminus, of inference? Thus the "applied" philosophy of logic leads inexorably to pure philosophical questions concerning the nature of truth and meaning. It is these questions which form the core concern of philosophical logic as Grayling conceives it.

It is not too gross a distortion to see the history of a large part of twentieth-century philosophy as the concrete enactment, in an Hegelian sense, of the abstract progression, just adumbrated, of concerns in the realm of ideas. Frege recently invented modern formal logic in the later nineteenth century, and such were the philosophical concerns, did the pioneering work in the philosophy of what he had invented. And, after him, Russell, Carnap, Quine, Strawson and, above all, Wittgenstein in his two periods, have assumed to know about Wittgenstein's philosophy, the *Philosophical Investigations*. There are, too, many frequent speculations as to the "truth" for the characters in the stories, which even when accurate are of minor sources of irritation, but are enough substantially to diminish one's admiration for this new edition, and definitively, arrived.

What Grayling's book aims to introduce its readers to is hence nothing less than what, at present at least, stands out as the most distinctive preoccupation of twentieth-century English-speaking philosophy: its belief in the central importance in philosophical logic, so characterized. His aim has been both to disclose the coherence

and purpose of this preoccupation and to put the reader in a position to follow the literature in which the various debates generated by that concern have been conducted. It is difficult for someone whose own philosophical interests have lain almost entirely in this area of philosophy to judge how successful Grayling may have been in the latter regard. In all but the final chapter of his book he maintains a scrupulously neutral stand on the various issues - even to the extent of giving some of the deadest dodos (for example, Dewey on truth) something

## Mutual concerns

The Modern Liberal Theory of Man  
by Gerald F. Gaus  
Croom Helm, £15.95  
ISBN 0 7099 1127 0  
Of Liberty  
edited by A. Phillips Griffiths  
Cambridge University Press, £9.95  
ISBN 0 521 27415 X

Gerald Gaus's book is an impressive effort to discover and discuss a coherent tradition of liberal thinking extending from J.S. Mill, through T.H. Green, Bernard Bosanquet, L.T. Hobhouse, and John Dewey to John Rawls.

These men are identified as the representatives of modern as opposed to classical liberalism. While classical liberalism, which continues to thrive in the work of men like F.A. von Hayek, emphasizes a supposedly necessary link between liberal politics, individualist ethics and market economics, the modern liberals attempt to reconcile the claims of individuality and community through arguments which are, in their conclusions, less hostile to the extension of state intervention in social affairs.

Hobhouse went farthest in this direction, writing that: "We must not assume any of the rights of property as axiomatic", and, "for the democrat, old laissez-faire positivism is no longer tenable". Bosanquet, in contrast, was opposed both to interference with the rights of private property in the means of production, on his grounds that to confine property rights to consumption alone would promote irresponsibility, and to the transference of responsibility for the welfare of the unfortunate from private charity to public services.

Clearly then the tradition which Gaus identifies is not a seamless one, it admits of wide variation both in philosophical assumptions, between the idealists Green and Bosanquet and the rest, and in its implications for policy. Yet it is not really misleading to speak of a single, coherent, modern liberal school of political thinking, and Gaus makes an impressive case for identifying its abiding concern as a particular view of human nature which, variously expressed, is found in all his thinkers. The historical source of this view can be found in Mill's criticism of Bentham for his lack of attention to man's need to develop and cultivate capacities which are, at first, merely potential and must be actualized through participation in social and political life. "The foundation of liberty", Hobhouse was to write, "is the idea of growth", and again, "the flower may become perfect at the expense of its neighbours, while for the man, this method of attaining perfection destroys it. The perfection of the human soul is a function of the perfection of others."

Images such as this illustrate the way in which the liberal concern for individual freedom became, through emphasis on the social conditions necessary to its fulfilment, a foundation both for what is often seen as the proto-socialism of Hobhouse and Dewey and the quasi-socialism of Bosanquet. Both wings of modern liberalism share the view that the realization of human freedom involves more than the unrestricted pursuit of private interest, but while the one trusts the regulation of communal life increasingly to a beneficent state, the other relies on the establishment and maintenance of conditions in which social and political responsibility can be assumed by actors who know and feel themselves to be partners in the national community. It is not hard to trace the influence of these ideas on the foundational arguments to British politics today.

Gaus divides his book into two parts.

of a run for their money.

For the most part his exposition is clear, although I fear that the pace of some of the discussion (especially the rehearsal of some of the recent realist/anti-realist debate in the theory of meaning) will defeat all but the most agile members of his intended audience. What is certain is that no comparable modern introductory treatment of these issues exists. Only very occasionally, so far as I can judge, does Grayling misrepresent any of his protagonists (as, for example, in his formulation of the description theory and

the sense theory of the semantics of proper names, in which error he has distinguished himself). The book certainly fulfils a present teaching need - though others have spotted the lacuna - and is likely to give valuable service for some time to come.

In the first regard, that of supplying a rationalized account of the main twists and turns taken by the dominant trend in twentieth-century philosophy, Grayling seems to me to succeed admirably. It is, however, sad that the book contains no satisfactory general

bibliography - references are compiled in footnotes listed at the end of each chapter, with no thought of the nuisance it will cause the reader repeatedly to have to rummage for the intended designation of *op cit*; and second, that the number of misprints and other typesetting howlers is horrifying.

Crispin Wright

Crispin Wright is professor of logic and metaphysics at the University of St Andrews.



This still from Robert Wene's 1919 film *The Cabinet of Dr. Caligari* is taken from *Passion and Rebellion: the expressionist heritage*, by Stephen Eric Bronner and Douglas Kellner (Croom Helm, £22.50).

The first deals with the modern liberal conception of human nature and contains discussions of individuality, social life, community and developmentalism; while the second looks at the political arguments about liberty, democracy and economic organization derived, in large part, from this anthropology. Following Isaiah Berlin, whose contributions of the book as a whole are, as one would expect from so distinguished a bevy of authors.

Hillel Steiner, L.S. Lustgarten, Peter Gardner, David E. Cooper, Jack Liveley, D.A. Lloyd Thomas, Roger Scruton, K.R. Minogue, Alan Ryan and Antony Flew. Benjamin Gibbs contributes a spirited defence of his argument in *Freedom and Liberation* in reply to Flew's no less spirited assault, and the range and quality of the contributions of the book as a whole are, as one would expect from so distinguished a bevy of authors.

David J. Levy

David J. Levy is lecturer in sociology at Middlesex Polytechnic.

## Denial of miracles

The Great Debate on Miracles: from Joseph Glanville to David Hume  
by R.M. Burns  
Associated University Presses, £17.50  
ISBN 0 8387 2378 0

Moral philosophy in Britain before the Second World War was mainly based on intuitionism and its foremost exponents recognized that many of its central tenets had been anticipated in the eighteenth-century controversy between the "intellectualists" and the moral sense school.

Philosophers of religion have been slow to recognize, however, that there is a parallel and fruitful anticipation of much in contemporary philosophical theology in the eighteenth-century debates between the orthodox Christian apologists and the Deists. One of the main aims, successfully achieved, of this volume is to lift the veil over one important aspect of the eighteenth-century debate, namely the fierce controversy about the possibility of, and the evidence for, miracles that raged throughout the century until around 1770.

So keen was the debate that the philosophical and theological questions raised, and the solutions offered, for and against miracles, are far more profound than anything to be found in general in contemporary discussions of the subject. This is not to suggest that the controversy about miracles is the eighteenth-century's most important theological legacy. Dr Burns draws attention to the unique case of Arthur Ashley Sykes, who around the 1750s coupled the evidential value of prophe-

The first area is excellently handled. Locke, at the end of the previous century, held that truths of revelation were "above reason", yet were certainly true, for God was no deceiver. The guarantee of their truth lay in the "bearer" of revelation, whose authority was recognized by his capacity to work miracles. Thus Locke, drawing upon a scholastic tradition, set the scene for the part miracles were to play as evidence of God's special revelation in the standard orthodox eighteenth-century apologetic. The Deists - Woolston, Toland, Chubb - believing that God's general revelation in his creation was sufficient, denied the need for special revelation and so prepared the way for a rigorous criticism both of the possibility and the evidence for the miraculous. The extreme orthodox - Samuel Clarke, for example - and the moderate orthodox, of whom the most able was Joseph Butler, countered with arguments mainly appealing to "rational probability": miracles were possible and the Gospel accounts of Christian miracles were such as to satisfy the rational man.

The second area is also well handled. Dr Burns convincingly argues that part one of Hume's "essay" on miracles probably dates to the youthful Hume's stay in the Lofra Valley when he composed the *Treatise*. He argues for the "classical" interpretation, as against some modern commentators, that part one is uncompromisingly anti-miraculous. Part two is later; the antagonistic attitude to miracles of part one toned down. Dr Burns shows how part two reflects well known anti-orthodox points made by the Deists, and how Hume's criticism of orthodox presupposes the extreme orthodox defence, almost completely ignoring the arguments of a moderate such as Butler.

Philosophical commentators on Hume, impressed by the first two thirds of the book, may be more critical of the author's long last chapter of criticism of Hume, mainly because the many topics raised deserve a volume on their own. However few can deny that in general this is a carefully written, thoroughly researched and ably argued book.

T.A. Roberts

T.A. Roberts is professor of philosophy at University College, Aberystwyth.











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## Overseas

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## Overseas continued

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# Don's diary

Sunday

Heat in Holland Park, the seat by a sunny pond and time to structure a schedule for the remainder of the summer vacation. Administration for 1983/84 is well in hand and the remaining weeks promise some productive writing. There's that partly revised paper in the office, stencilled and parked to catch my eye and stimulate activity; more lectures - and the book, abandoned some three years ago, occupying the new chair at Bradford became incompatible with meeting publisher's deadlines. And then the cuts of '81 and the chaos of reconstruction but now, perhaps, one might dream a little? The sun encourages optimism and the thought of future release from chairmanship of undergraduate studies generates hope, so why not outline a revised introduction?

The writing is a leisurely process interrupted by a duck with offspring, children with cardboard boxes en route for a picnic and an invasive transistor. But the hours are productive and it's pleasant to greet the end of the day with modest achievement. Pleasant, also, to walk back to the hotel through London parks, across elegant squares, alongside reminders of past centuries, sleeping hours and a two-page memorandum structures itself, paragraph by paragraph: we need action - urgent action.

Back in Bradford the new Undergraduate Chairman mumbles something about storms and lightning damage to equipment in our research unit, but I barely hear. The office is busy (where are those pools of vacation time quiescence described on the back page of *THESE*?) but the memo gets typed, duplicated, delivered to various recipients - then the muzzling about lightning has an opportunity to make an impact. Our research unit is used off-campus in the attic of two Victorian villas. Lightning has damaged the roof and a microcomputer; the mini computer has still to be checked over, but interfaces have been affected and our technicians' work ruined.

At the end of the day I drive slowly home, by the longer route which will take me down a beautiful Pennine valley. At its nearer end I stop, some 1,000 feet above sea level, then look down the moorland, the meadows and downward to the weaving hemlet where we live. Still there is sun, as there was in Holland Park, but that hypothetical schedule has shifted somewhat since Sunday!

Monday

The CIBA Foundation's hospitable welcome, a mix of old friends and new acquaintances and the topic of *Medical education today - a deteriorating experience?* Among old friends at the meeting are psychologists with whom I attempted to plan pre-clinical courses for contemporary medicine: it's an area of activity missing from the Bradford existence so I was happy to have CIBA's invitation and to catch up with mergers and their consequences.

Tuesday

To the SSRC via Gray's Inn, Lincoln's Inn and down to the Temple - Norman doorway, medieval garden. Then into the SSRC's modern world of *Microcomputers and Education*. The discussion is stimulating and generates notions for research at Bradford. We have some microprocessor developments and - more important - research links with the school environment. What becomes evident is the need for an interface between university groups and classroom staff: perhaps we could facilitate the translation of academic ideas into practical reality?

Back to the hotel via Covent Garden: we were hurried there, in the Crown Court church which is embedded within a theatre where fruit loaves competed with wedding guests for parking and a hot summer day developed the ambient atmosphere of that fascinating area. But now a total transformation in this new world of wine bars, boutiques and up-market bakers.

A Bradford phone message from the department: will I ring back tonight, who the call came from a sensible soul, so I assumed it's good news - perhaps a job for that psychopharmacological postgraduate? A leisurely bath, change of the phone. But it is good news: the unexpected and imminent departure of another of the academic staff, bringing the total for our 1983 turnover to 50 per cent. And the losses are of expertise in computing, research design, statistics, human information processing and performance efficiency - essential aspects of experimental psychology which are relevant to the information technology explosion. I generated dismay, despair, frustration and anger: what of all that dead wood which was to drop from university trees after the 1981 making?

Wednesday

A wake at Bradford central processor: I have been active through the

Thursday

An unexpected visit from one of our honorary research fellows: he's working, enthusiastic and still searching for funding. We plan together and I promise to write more letters - then back to the reshuffling, the telephone calls, the talk, talk, talk. Thank Heaven the staff have, as always, rallied round and responded immediately to the need for new oversight on timetables and teaching proposals. Consulting plans begin to take shape, with the pieces of dedicated courses.

Off to the district health authority - impending cuts there, but a competent chairman and a cohesive management team: chat with them after the business, then home to television escapism.

Friday

Phone call from a Bradford professor recovering from coronary thrombosis: news of another professional casualty, now safely out of intensive care. Chat with our dean of life sciences: mutual regret that academic staff are unacceptably overloaded, secretaries overstretched. More planning: talk, phone calls - then sandwich lunch in the bar with psychology staff and a mature student working as a research assistant throughout the vacation. He's a lively, cheerful soul who, together with the lunchtime gin, lifts my morale!

Back in the office we try to prepare undergraduate material - course outlines, student handbook and so on, but there's no alternative to postponement until late September: there will be frantic scramble, almost inevitable errors, and a general feeling of frustration.

Saturday

Again awake at 4 am, churning over recent events, recalling an administrator's opinion that some academics thrive on this hand-to-mouth existence.

Also awake until 8.00 when spouse brings breakfast tray and a different day dawns. Domestic pottering, arrival of son, Kleenex sink philosophy and delight that daughter passed her law exam.

Gradual unwind and Bradford recedes: also recording is the book, but the bathroom scales tell me that since last Saturday I've shed two of the surplus pounds acquired during summer term examinations!

Margaret Christie

Long hot summers are few and far between in this country. And they always seem to coincide with my forays into the world of policy-making and administration. In 1976 I found myself sweltering on the fourth floor of the Cabinet Office from 9.30am to 6.30pm. This year I am locked into county Hall for the same hours. Were I still an academic it would be the vacation and while not exactly a holiday I would have set up my card table in the garden and quietly got on with reading and writing in the sun, which like some ancient civilizations, I worship. In fact people keep asking me how much holiday I get as a local government bureaucrat. The reply is a snappy - six weeks - and that's no longer than I took as an academic! But I have to admit that though the length of the holiday taken is no different I do miss working in the sun.

Holidays can in any case be overrated. Some of the worst time of one's life are on holiday. Several of the men in my life have recognized this, although I always fought them, because they took it to extremes. My father agreed to going on holiday with his family twice during my childhood. My main memory of one of these occasions is of him miserably pacing the beach in the rain in a specially purchased pair of green slacks and sandals, which he never wore again.

My ex-husband had a similar aversion to leaving home. When abroad he missed his comforts desperately and was always the first to succumb to salmonella poisoning and the ghastly consequences of not being able to abandon close proximity to the lavatory. Copper-coloured hair and the complexion that goes with it led even to his toes getting sunburnt if he was rash enough to remove his socks. And not being much of a swimmer he had a strong aversion to beaches and the sea.

When foolishly dragged by me and some close friends on a Welsh seaside holiday he spent much of the time locked in the car by the side of the beach, escaping from the sun and children alike, as he worked his way through the novels of Tolstoy. How much more comfortable to have done the same thing at home. My son's behaviour on holiday last year, (disbelief at the time), suggests that he may have inherited a preference for relaxation in familiar surroundings, shared by his father and maternal grandfather. But perhaps it was just that he had passed the stage where a holiday with his mother, his mother's boyfriend and his younger sister was appropriate.

Going away with people who prefer to take their holidays at home is in my experience almost as bad for the enthusiastic traveller as for those who did not want to go. The "stay-at-homes" seem to have an uncanny ability to make those who pushed them into going

Weather fine, wish you weren't here



Tessa Blackstone

away feel guilty. If the beds are hard, the weather wet and cold or the food lousy it is the fault of those who thought up the whole thing. After a long and desperate search for a British paper to make them feel at home has been achieved, pointed referees are made to the fact that it's 75° and sunny in London.

Familiarity with surrounds breeds advantages

Discussions are started about whether it is possible to change the air ticket or bring forward the ferry reservation. Various minor psychosomatic illnesses start occurring and conversation comes round to the question of whether you can trust foreign doctors or foreign dentists. Getting from one place to the next starts to become an enormous hassle with arguments about the route, map-reading and who is going to drive.

Worries start arising about the two papers that have to be prepared for the September conference season with the inference, "if you hadn't dragged me here I could be quietly working on the job at home". And so on and so on. Telling my mother for years that it is better to go away without them.

However, when both partners in a relationship want to go on holiday it does not always turn out to be the hoped for idyll even if the objective conditions are good. Holidays can put a strain on the best of relationships even when both partners want to go.

Union view

Getting things into another perspective

Following the publicity given to the Leverhulme Report, June and July saw the publication of two consultative documents which are potentially of much greater significance for public sector higher education: the CNA's *Academic Policies at Undergraduate Level* and the National Advisory Body's document *Towards a Strategy for Local Authority Higher Education in the Late 1980s* and early 1990s. Both documents, while providing different perspectives, are remarkably similar as to the issues to which they address themselves and which they fore establish the parameters within which the debate about higher education will take place.

It is important that these parameters are called into question for a number of reasons. For example, neither document says anything very specific about provision for mature students, other than discussing how to improve access and provide more flexible course patterns. The recent Manpower Services Commission consultative document *Towards Adult Training Strategy* clearly indicates ways in which an educational system can provide for the adult, particularly in the provision for those who have been out of education for some time.

But this issue is only raised obliquely

when NAB articulates the fears that the local authority sector could develop "second class" status if it were to be uniquely identified with vocational and adult education and training. The NAB's document, while not explicitly stating this, does suggest that the local authority sector could develop "second class" status if it were to be uniquely identified with vocational and adult education and training. The NAB's document, while not explicitly stating this, does suggest that the local authority sector could develop "second class" status if it were to be uniquely identified with vocational and adult education and training.

NAB has expressed its fears that while paying lip service to the concept of partnership with the education service, the MSC appears to anticipate having a leading role in the development of adult education and training. Given these worries, which NAB shares, it is curious that the NAB strategy paper is so unimaginative concerning provision for mature students.

Perhaps more surprisingly neither document comments in detail on relations with the university sector and, of course, the NAB only deals with local authority higher education. While agreement has been reached for closer coordination with the voluntary sector, clearly the universities help to set the agenda for higher education development and constrain the possibilities for change. This is as true for the CNA as it is for the NAB and is recognized by the inclusion of the NAB representative from the University Grants Committee.

But this issue is only raised obliquely

The structure of normal daily life, which helps keep people going, is too much conflict, is suddenly dismantled. There is a plethora of decisions, many of them trivial but most of them potential source of disagreement and irritation that have to be made. What time to stop for lunch; which restaurant to go to; where and when to break the journey at night; which museum to visit; whether it is too hot for the beach; not too hot enough.

Saintly people never stop to fret about such matters; but most of us do not acquire this state of grace. Another problem is that while at home a substantial part of the day is spent away from spouses, partners and children, on holiday it is hard to get away from them. The saintly response is to let the purpose of a holiday is to be with one's loved ones. True, but how much you care for them a little break can go a long way.

There is, however, a solution. For many years I thought the upper middle class intelligentsia's predilection for buying houses in Tuscany or Provence had few advantages and the severe disadvantage of tying one down as well as all the tedious responsibilities of ownership. But what makes it approach to holidays attractive is that it provides the advantage of a break and a change of surroundings without the strains that unfamiliarity can impose. It is in fact much more pragmatic than had previously realized.

As long as the house is large enough, friends can be invited to share a pleasures and dilute the alternating arguments and boredom of the nuclear family. And there will probably be somewhere to escape for peaceful reading or even writing conference papers. The local restaurants can be explored at leisure and, if the food, wine, ambience and price, so that the parsimonious feelings are predominant, like cheap tins of selected and where more luxurious can be chosen. There is no need to go on a time consuming search for the best shop or the public tennis courts because their whereabouts has been established.

Perhaps it is a sign of middle age that holidays, which involve relaxing and reading in some quiet and sunny corner, seem more attractive than they used to be and more appealing. If less adventurous, then long journeys by whatever form of transport, to unknown places that quite often turn out to be a disappointment. Perhaps it is a sign of becoming blasé about glamorous far away places. While an offer of a trip to Western Samoa would be hard to turn down, I have increasingly become convinced that the vital ingredient is not the place and what it has to offer, but the holiday companions and what they have to offer. If they wish they were at home I start doing so too.

When NAB articulates the fears that the local authority sector could develop "second class" status if it were to be uniquely identified with vocational and adult education and training. The NAB's document, while not explicitly stating this, does suggest that the local authority sector could develop "second class" status if it were to be uniquely identified with vocational and adult education and training.

However, it is true that the documents do address themselves to a number of issues which have been placed on the agenda by discussion both by the government and the present climate of constrained resources. The agenda can therefore be seen as "different" while still being "new" or "different". Perhaps inevitably given NAB's terms of reference, resource constraints are not challenged so that questions of improving access are too easily transformed into questions about improving conditions of transfer, or redistributing existing resources of provision to extend opportunities to more people.

Throughout the debate it is essential to point out the ways in which the questions about higher education are far from open ended. Obviously, many identify what is possible over the next few years, but if we lose sight of longer term goals to transform the higher education system, giving genuine open access and a comprehensive level of provision, we will allow the system to become permanently distorted. NAB for one; intends to ensure that this does not happen.

Jean Bocock

The author is the assistant secretary higher education of the National Association of Teachers in Further and Higher Education.

## LETTERS TO THE EDITOR

Criteria by which research should be judged

Sir, - I am writing out of sheer disillusion with the current system of university postgraduate research studentships. Your pages have on occasion contained discussion of low submission rates for postgraduate dissertations. Perhaps my experiences might throw some light on this.

I registered in 1977 for a MSc by research in sociology and received a full-time Social Science Research Council grant for two years. Originally I had hoped to upgrade to a PhD and to extend the grant for a further year. My research was tailored accordingly. In the event, after a maternity break at the end of the first year, the work was not as advanced as it might otherwise have been. I have been lucky in that, contrary to the experience of some students, my relationship with my two supervisors has been on the whole reasonable and pleasant. However, in assessing my work at the one-year-on stage, they did not feel that they could recommend upgrading. Their stance was, I believe, compounded by the view, held in some quarters of the department, that women students with young children do not complete and submit (although at least two women students with children have succeeded in gaining PhDs in the department in recent years).

When my grant ended I started part-time, hourly-paid work at the polytechnic while continuing my research as best I could with a husband whose only income was a student grant and a small child who attended the university nursery three days a week, which was much as we could afford. I continued to have a desk in the sociology department which provided gradual, relatively undisturbed, workspace. Perhaps more importantly, it also maintained the informal contacts with staff and other students which I had established over the two full-time years. In this particular department there was no formal forum for research students other than twice-yearly seminars in which I presented my work. An SSRC grant were required to give an annual working paper.

Two years ago, having just got his degree, my husband began an affair with one of the sociology department lecturers who then offered to support him while he looked for work if he would move to live with her. They now have a house together. The point of mentioning this is, of course, that her intervention in my private life has, inevitably, had ramifications beyond the domestic sphere. Given my salaried position within the department, and given the antagonism between us, it was I who was put in the position of moving out from the department thereby losing contacts, encouragement, and support. On the whole I believe that I was rendered invisible in any formal departmental terms.

Divorce impending, with a small child to support, I nevertheless continued to write up my research in between, by now, two part-time posts (Open University and polytechnic). Also taking on whatever other work came my way as a writer and as a lecturer. Eventually I submitted my thesis last November with, I believe, the general approval, support and relief - of my supervisors. I believed, and still maintain, that it is of reasonable standard for a masters degree. However, the external examiner, whose work I generally respect, insisted that the work should be rewritten in places. Ironically, one of her recommendations is that I reorganize material to foreground my political perspective. As it happens, this would conform to earlier intentions which were changed at the recommendation of one of my supervisors because of the "lucky dip" nature of the appointment of external examiners and the, as they saw it, danger of antagonizing the examiner through upturning my own political position. This is, of course, perfectly valid advice given the unpredictable circumstances. Postgraduate dissertations are in the peculiar position of being addressed to an unspecified audience in terms of academic and political preoccupations within the specialist field. The examiner, as reader, holds an unparalleled degree of individual power over the particular writer. Meanwhile, I gather that the internal examiner has indicated that he had considered the work acceptable. However, in these instances the external examiner's opinion always prevails.

The externalist's view of comments are, of course, in many ways pertinent: a piece of work in progress and can certainly see flaws and limitations in mine. However, it was a *studentship* and I have learnt a tremendous amount from the work both in terms of approaches to research and in relation to my subject area. Originally I accepted the empirical "out into the field" approach generally favoured by my department. This would not now be my approach. Besides which, as is inevitable over five years of study, my local interests have changed. However, the legacy of the initial empiricism, combined with a shift towards an interest in more theoretical questions emerges as an uneasy tension within my thesis which, in the attempt to remain true to the original intention and to incorporate much of the original research material, has ended up with some uncomfortable juxtapositions of which I am only too aware. However, surely this tension precisely represents the extent of the learning process experienced. Previously I had no research experience. This, presumably, is why research opportunities are offered as *studentships*, as a form of training through first-hand experience.

There is a crucial set of issues relating to the criteria by which a masters by research should be judged, or rather, since the criteria in play are essentially the same as those applicable to a PhD, a problem of defining the appropriate "gap" in standard between the two types of higher degree. It is, it seems, clearly established that a PhD is an original, well-presented piece of research which is coherent at a theoretical level as well as in terms of the practical project undertaken. What constitutes - and should constitute - a masters is, I think, less clear. My work does, I believe, raise interesting questions, the original research was fairly extensive, and I learnt a lot from it. This, it seems, is not sufficient. What then is the distinction between a masters by research and a PhD? With

finance for research studentships constraining, more people may find themselves obliged to register part-time for research probably leading, in the first instance, to a masters. Given this situation, I would like to suggest that the question of the distinction between a taught masters, a masters by research, and a PhD by research is likely to become increasingly pertinent and should therefore be considered in length and specified in detail by universities for the sake of students and their supervisors.

Meanwhile, given five and a half years work invested and the number of domestic and economic problems already encountered, I agreed last March to rewrite as suggested for resubmission this autumn. I even gritted my teeth a few weeks ago and reworked some sections on a study which I feel I have long since outgrown. Then, at the end of June, I received formal notification of the examiner's decision (postage costs, travel...) can hardly cost this much, clearly a specific penalty is involved, and that penalty falls on me, not on my department, my supervisors, or on anyone else involved. Given part-time, hourly paid work it is not easy to find such a sum of money (I already have a debt to the university student hardship fund incurred in relation to initial typing costs). Furthermore, the whole episode has come to feel like a case of "blaming the victim". There has been no formal contact from the sociology department, no statement of sympathy other than the odd informal comment passed back to me through one of my supervisors, no gesture of support.

One of my supervisors has, in fact, ventured to comment that it may have been a tactical error on their part not to have argued for upgrading since the external examiner's remarks are taken recognition while still expressing her reservations in relation to my work. But should recognition of postgraduate work be consequent upon correct tactics? While hardly an original observation, it is perhaps worth commenting that the completion and successful submission of a dissertation is no direct or adequate measure of the quality of candidate. However, recognition of inadequacies in the system does not really alleviate the shock of rejection of months of writing and several years of work.

Overall, therefore, perhaps we should be surprised not at the low proportion of projects that reach the stage of submission in dissertation form, but at the fact that any ever reach that stage at all. In my case it has felt like a burden race with an unpredictable number of hurdles and very little support from the university as backer. I think that I have fallen at the last fence - or is it the last? If I were to rewrite and pay my resubmission fee, I might simply find yet a further hurdle waiting to be erected!

Yours faithfully,  
LIZ WELLS  
ex-department of sociology,  
Bristol University.

TUC general council

Sir, - I noticed with interest your report on the elevation of Mrs Lil Stevens to the TUC general council. I must, however, correct one piece of information given in that report. Mrs Stevens is not a member of the Birmingham City Council's education committee. She was nominated to that position by the Birmingham Trades' Council in May 1982 but failed to attend any meeting during the municipal year 1982/83. The Birmingham Trades' Council have now nominated a new member.

Yours faithfully,  
B. J. MEADOWS  
Chairman, Birmingham City Council Education Committee.

Scots talk

Sir, - I should explain that the conversation with elderly Scott (THES, August 19) were back in the 1930s; I doubt if there are any survivors of the Robertson Nicoll era today.

Yours etc.  
JOHN GILLARD WATSON  
32 Beachcroft Road,  
Oxford.

Union monopolies

Sir, - I noted a recent letter in your correspondence columns suggesting that the Inner London Education Authority is maintaining a monopoly in favour of the National Association of Teachers in Further and Higher Education (THES, July 29).

This of course is not the case, there are three associations with union functions represented on a number of committees of the ILA dealing with such matters as conditions of service or advising the education committee and the chief education officer through the standing advisory committee for further and higher education.

These three associations are: The National Association of Teachers in Further and Higher Education; The National Society for Art Education (representing many staff concerned with Art and Design); The Association of Principals.

It is important to state the actual situation to prevent mistaken concepts or myths taking root.

Yours faithfully,  
A. SAUNDERS  
Immediate Past President,  
The National Society for Art Education.

Commonwealth report

Sir, - Grateful as we must be to you for your special number on the Commonwealth universities, I wonder whether some of the things that are said in it will altogether endear you to our Commonwealth friends.

For example, in your contents list on page 15, Ghana comes out as Guyana. Also, the section on Nigeria on page 22 seems to have been written by someone with no knowledge of that country! Beyer is not a place, but the name of the University at Kono. The University of Nigeria, which you say "is also based in the capital" along with the universities of Lagos and Ife, is on the side of the country. Equally, of course, the University of Ife is not in the capital; it is at Ife.

Yours sincerely,  
J. D. FACE  
Professor of African History,  
The University of Birmingham.

The threat of further uncertainty

Change has been part and parcel of the work in further education for the last 25 years. The ability of the further education service to adapt in response to the changing needs of industry, commerce and the community has always been its strong promise. But there will be a need to change but what is different, is the amount of uncertainty which exists in the Scottish system today.

In the past few weeks the Secretary of State for Scotland has pronounced on the report of the Council for Tertiary Education. In his statement Mr George Younger talks of transferring three colleges from the local authority to the centrally funded sector on the strength that those colleges are involved primarily in the provision of advanced level courses. There has not however been any clear statement as to what will happen to advanced courses currently being taught in further education colleges not involved in the proposed alterations to the structure. Is it the intention of the Scottish Education Department to transfer all advanced courses to the centrally funded sector? If this is the case, will the staff currently involved in the teaching of the courses be offered employment in the colleges to which the courses are transferred? Those are questions which are causing a great deal of concern in local authorities.

One of the major advantages of the present system is the comprehensive provision made by further education colleges enabling students to enter the system at the level appropriate to them and continue their studies in the same college. There is also the advantage that highly qualified staff can be used for both advanced and advanced level courses. Any change which would mean better qualified staff seeking employment elsewhere would be a disadvantage.

Concerns the Youth Training Scheme. With the official start date a matter of days away, many colleges still do not know what demands are going to be placed on them. This has been partly due to the differences in opinion which have existed over the fees to be charged for the "off the job" element of any scheme. The Convention of Scottish Local Authorities have now determined a rate of £1.19 per student hour which is considerably higher than the rate being charged in England. Many firms are not prepared to meet this amount with the result that there has been a boom in business for the private sector who are cashing in on the YTS. Perhaps now is the time for local authorities to recognize that they are now in a commercially competitive situation and should respond by using business methods. The success of any business depends on getting the right product on the market at the right time and price. If a competitor appears to be securing a large market share through pricing policy then such a change has to be met. There is no doubt that the resources are available within further education to meet the need of trainees but the price is out of line with that of competitors. Unless this is rectified then an increasing amount of further education work will go to the private sector.

There is a real danger that further education could lose the advanced courses to centrally funded colleges and the YTS work to private enterprise. This could leave the existing courses up to ONCO level. The Scottish Education Department's 16-18 in Scotland - An Action Plan proposes considerable alterations to this type of course with perhaps some of the work being done in schools.

Further education must continue to provide a comprehensive service to industry, commerce and the community at all levels. To allow this to be done, the areas of uncertainty must be removed so that plans can be made to meet the changing needs of those present and potential users.

George R. Stewart

The author is president of the Scottish Further Education Association.

Private degrees

Sir, - The University of Buckingham can now award university degrees rather than diplomas and yet it could not exist during the summer term without a massive influx of part-time lecturers from other universities. What kind of academic integrity does this represent? If a body purporting to call itself a university cannot exist in its own right, with its own full-time staff, we might as well off become free-lance moonlighters and allow the Government to render all academics redundant.

Yours sincerely,  
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Letters for publication should arrive by Tuesday morning. They should be as short as possible and written on one side of the paper. The editor reserves the right to cut or amend them if necessary.